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13. INSECTA

BY

THE COMMONWEALTH INSTITUTE OF ENTOMOLOGY

FOREWORD

THE attention of readers is directed to the fact that the systematic part of the Record is reserved only for information of purely taxonomic value. References to data on morphology, physiology, bionomics, ecology, distribution and other general problems must be looked for in the Subject Index, where they are arranged by orders under each heading. It is hoped that the classification of headings in the Subject Index will make the information more complete and readily available and render the Record of more value for entomologists working on general problems, without affecting its importance for taxonomists.

Entomological papers written entirely from an economic point of view are omitted, but abstracts of these will be found in the *Review of Applied Entomology*.

Very brief papers, usually those dealing with a single species, are noticed either in the Subject Index or in the systematic part, but do not appear in the list of titles.

The writers of systematic papers are requested to mark new synonyms with the words (*n. syn.*), as otherwise it is impossible to ensure that they will be correctly recorded.

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1.—Memoranda and reports submitted to the International Commission on Zoological Nomenclature by the Secretary to the Commission at the session of meetings held by the International Commission during the Thirteenth International Congress of Zoology, Paris, July 1948. Bull. zool. Nomen., London **3** 1950 pp. 1–154.

2.—Communications submitted to the section on nomenclature, Thirteenth International Congress of Zoology, Paris, July 1948. Bull. zool. Nomen., London **3** 1950 pp. 157–199.

3.—The official record of proceedings of the International Commission on Zoological Nomenclature at its session held in Paris in July 1948. Bull. zool. Nomen., London 1950 **4** pp. 1–760.

4.—The official record of proceedings of the section on nomenclature of the Thirteenth International Congress of Zoology held in Paris in July 1948. Bull. zool. Nomen., London **5** 1950 pp. 1–128.

5.—Reports submitted by the section on nomenclature and by the International Commission on Zoological Nomenclature to the Thirteenth International Congress of Zoology at its final plenary session held in Paris on 27th July, 1948. Bull. zool. Nomen., London **5** 1950 pp. 135–168.

6.—Current entomological literature. Ent. News, Lancaster, Pa. **60** (1949) 1950 pp. 244–251, 263–269; **61** 1950 pp. 15–27, 42–53, 73–81, 108–114, 141–155, 179–188, 209–217.

Abalos, J. W. see Wygodzinsky & Abalos.

7.—Abbott, C. H. Twenty-five years of migration of the painted lady butterfly, *Vanessa cardui*, in southern California. Pan-Pacif. Ent., San Francisco **26** 1950 pp. 161–172, 1 fig. [Lep.]

Abdul Wahid Khan see Afzal Husain & Abdul Wahid Khan.

8.—**Abonnenc, E. & Chassignet, R.** Phlébotomes de la Guyane française (XXIII). Description d'une espèce nouvelle: *Phlebotomus flochi*. Publ. Inst. Pasteur Guyane Terr. Inini, Cayenne no. 167 1948 4 pp. 9 figs. [Dipt.]

Abonnenc, E. see Floch & Abonnenc.

9.—**Abul-Nasr, S. E.** Structure and development of the reproductive system of some species of Nematocera (Order Diptera: Suborder Nematocera). Philos. Trans., London (B) **234** 1950 pp. 339–396, 36 figs.

10.—**Aczél, M. L.** A revision of the genus *Xanthaciura* Hendel (Trypetidae, Dipt.) based on Argentine species. Acta zool. illoana, Tucuman **8** 1949 pp. 111–146, 3 pls. 7 figs.

11.—**Aczél, M. L.** Notes on Tylidae, I, II. Acta zool. illoana, Tucuman **8** 1949 pp. 161–196, 11 figs., 219–280, 2 pls., 13 figs.

12.—**Aczél, M. L.** Catálogo de la familia de las Tylidae (Calobatidae+Micropedidae + Neriidae, Diptera) en la región neotropical. Acta zool. illoana, Tucuman **8** 1949 pp. 309–389.

13.—**Aczél, M. L.** Catálogo de la familia Conopidae (Diptera) de la región neotropical. Acta zool. illoana, Tucuman **9** [preprint 1950] pp. 49–84.

14.—**Adamczewski, S.** Ecological studies on the mining Lepidoptera of the National Park of Białowieża. [In Polish with English summary.] Ann. Univ. Marie Curie-Skłodowska, Lublin (C) **5** 1950 pp. 135–195.

15.—**Adamczewski, S.** Notes on the Lepidoptera of Poland II. [In Polish with English summary.] Fragm. faun. Mus. zool. polon., Warsaw **6** 1950 pp. 95–110.

16.—Adamović, Z. Seconde contribution à l'étude des Asilides comme les ennemis des abeilles. [In Serbian.] Arch. Sci. biol., Belgrade **2** 1950 pp. 74–79, 3 figs. 1 map. [Dipt., Hym.]

Adamson, C. M. see Tahmisian & Adamson.

17.—Aerts, W. Hymenopteren des Rheidter Wertchens bei Köln. Decheniana, Bonn **104** 1950 pp. 33–59, 1 map.

18.—Afzal Husain, M. & Abdul Wahid Khan. Bionomics and control of the walnut-weevil (*Alcides porrectirostris* Mshll.) (Alcidinae : Coleoptera). Indian J. Ent., New Delhi **11** (1949) 1950 pp. 77–82, 9 figs.

Agacino see Morales Agacino.

19.—Agenjo, R. Acerca de cuatro *Cidaria* (sensu latus) descritas de España, de las que dos pasan a sinonimia de las otras y una constituye género nuevo. Eos, Madrid **26** 1950 pp. 321–339, 2 pls. [Lep.]

20.—Agenjo, R. Diagnosis de dos nuevos géneros de Larentiinae (Lep. Geom.). Graellsia, Madrid **7** 1949 pp. 105–106.

21.—Agenjo, R. Posibilidad de determinar Lepidópteros en estado de pupa, mediante estudio de los aparatos genitales. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 530–534, 1 fig.

22.—Agrell, I. The fluctuation of pH, buffer capacity, and pH-dependance of hydrogen activating enzyme systems during insect metamorphosis. Acta physiol. scand., Stockholm **16** 1949 pp. 9–19, 6 figs. [Dipt.]

23.—Agrell, I. Occurrence and metabolism of free amino acids during insect metamorphosis. Acta physiol. scand., Stockholm **18** 1949 pp. 247–258, 5 figs. [Dipt., Lep.]

24.—Agrell, I. The variation in activity of apodehydrogenases during insect metamorphosis. Acta physiol. scand., Stockholm **18** 1949 pp. 355–360, 3 figs. [Dipt.]

25.—Agrell, I. Hydrogen-activating enzymes during the insect metamorphosis. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 192–198, 5 figs.

26.—Ahmad, M. The phylogeny of termite genera based on imago-worker mandibles. Bull. Amer. Mus. nat. Hist., New York **95** 1950 pp. 41–86, 17 figs. [Isopt.]

27.—Albuquerque, D. O. Sobre alguns tipos de Macquart (Diptera, Muscidae), existentes na Coleção do Museu Nacional de História Natural de Paris (3a nota). Rev. Ent., Rio de Janeiro **21** 1950 pp. 241–246, 10 figs.

28.—Alcaide, A. P. Estudios sobre Meloidae. II. Los Mylabrini de la península ibérica. Bol. Pat. veg. Ent. agríc., Madrid **17** (1949) 1950 pp. 61–82, 75 figs. [Col.]

29.—Aleš, S. Additio ad cognitionem speciei *Pterostichus (Orites) negligens* Strm. (Col. Carab.). [In Czech with Latin summary.] Acta Soc. ent. Čsl., Prague **47** 1950 pp. 154–159.

30.—Alexander, C. P. Undescribed species of Japanese crane-flies (Diptera: Tipulidae) Part 7. Ann. ent. Soc. Amer., Columbus **43** 1950 pp. 418–436.

31.—Alexander, C. P. New or little-known Tipulidae (Diptera). LXXXVI–LXXXVIII. Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 301–324, 672–695, 935–959.

32.—Alexander, C. P. Entomological results from the Swedish Expedition 1934 to Burma and British India. Diptera: Tipulidae–Pediciini collected by René Malaise. Ark. Zool., Stockholm **42A** 1950 no. 2, 21 pp. 19 figs.

33.—Alexander, C. P. New or insufficiently-known crane-flies from the Nearctic region (Diptera, Tipulidae). Parts XII, XIII. Bull. Brooklyn ent. Soc., Lancaster, Pa. **45** 1950 pp. 41–47, 156–160.

34.—Alexander, C. P. Undescribed species of crane-flies from the western United States and Canada (Dipt. : Tipulidae). Part XII. Ent. News, Lancaster, Pa. **61** 1950 pp. 29–35.

35.—Alexander, C. P. Undescribed species of crane-flies from the eastern United States and Canada (Dipt.: Tipulidae). Part XI. Ent. News, Lancaster, Pa. **61** 1950 pp. 163–171.

36.—Alexander, C. P. Undescribed species of Tipulidae from the western United States Part IV (Diptera). Pan-Pacif. Ent., San Francisco **26** 1950 pp. 81–85.

37.—Alexander, C. P. New or little-known species of exotic Tipulidae (Diptera): VII. Proc. R. ent. Soc. London (B) **19** 1950 pp. 85–89.

38.—Alexander, C. P. Notes on the tropical American species of Tipulidae (Diptera). VI. The tribe Limoniini, genus *Limonia*: subgenera *Limonia*, *Neolimnobia*, *Discobola* and *Rhipidia*. Rev. Ent., Rio de Janeiro **21** 1950 pp. 161–221, 42 figs.

39.—Alexander, C. P. The Tipulidae (Order Diptera) of Rancho Grande, north-central Venezuela. Zoologica, New York **35** 1950 pp. 33–56, 39 figs.

40.—Alfaro, A. Orugas de *Archips* en el arbolado frutal de la ribera del Jalón. Bol. Pat. veg. Ent. agric., Madrid **17** (1949) 1950 pp. 37–59, 22 figs. [Lep.]

41.—Alfken, J. D. Die Insekten des Naturschutzparkes der Lüneburger Heide. 4. Die Hautflügler mit Ausnahme der Bienen. Abh. naturw. Ver. Bremen **32** 1942 pp. 222–232. [Hym.]

42.—Allen, A. A. *Coeliodes nigratarsis* Hartmann (Col., Curculionidae) in Scotland: an addition to the British fauna. Ent. mon. Mag., London **86** 1950 pp. 88–89.

43.—Allen, A. A. Two species of Carabidae (Col.) new to Britain. Ent. mon. Mag., London **86** 1950 pp. 89–92.

d'Almeida see Ferreira d'Almeida.

Alonso see Gutiérrez Alonso.

44.—Amsel, H. G. Die Microlepidopteren der Brandt'schen Iran-Ausbeute. 2. Teil. Ark. Zool., Stockholm (2) **1** 1950 pp. 223–257, 5 pls.

An, M. see Kühn & An.

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45.—Ander, K. Rassenbildung und Variabilität bei der Skandinavischen *Platycleis denticulata* Panz. (Salt. Tettig.). Förh. K. fysiogr. Sällsk. Lund **19** (1949) 1950 no. 3 pp. 31–54, 2 figs.

46.—Ander, K. Zur Verbreitung und Phänologie der boreoalpinen Odonaten der Westpaläarktis. Opusc. ent., Lund **15** 1950 pp. 53–71, 2 figs.

47.—Ander, K. Entomology in Lund, its history and present state. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 44–48.

48.—Anders, G. Einwirkung eines geschlechtsumwandelnden Faktors ("tra") auf den pleiotropen Effekt des Gens "lozenge-clawless" ("lzl") bei *Drosophila melanogaster*. Arch. Klaus-Stift. Vererb. Forsch. Zürich **23** (1948) 1949 pp. 510–512. [Dipt.]

Anderson, J. L. see Weber & Anderson.

49.—Anderson, J. M. A cytological and cytochemical study of the male accessory reproductive glands in the Japanese beetle, *Popillia japonica* Newman. Biol. Bull., Lancaster, Pa. **99** 1950 pp. 49–64, 2 pls. [Col.]

50.—Anderson, J. M. A cytological and cytochemical study of the testicular cyst-cells in the Japanese beetle. Physiol. Zool., Chicago **23** 1950 pp. 308–316, 2 pls. 1 fig. [Col.]

Anderson, J. R. see Post & Anderson.

Andrade see Freire de Andrade.

51.—d'Andretta, Jr., C. & d'Andretta, M. A. V. Espécies neotropicais da família Simuliidae Schiner (Diptera Nematocera) VI—Redescricao do *Simulium pertinax* Kollar, 1832. Papéis avulsos Dep. Zool., São Paulo **9** 1950 pp. 193–213, 53 figs.

d'Andretta, M. A. V. see Carrera & d'Andretta.

52.—Anduiza, R. Ecos entomológicos desde Bilbao I. Reblandecimiento de lepidópteros. Graellsia, Madrid **7** 1949 pp. 77–79.

53.—**Anduze, P. J. & Capdevielle, A.** *Anopheles (Anopheles) guarao* sp. nov. Bol. Ent. venezol., Caracas 8 (1949) 1950 pp. 119–124, 4 figs. [Dipt.]

54.—**Angelier, E.** Recherches sur la faune des sables littoraux méditerranéens. Vie et Milieu, Paris 1 1950 pp. 185–190.

55.—**Antoine, M.** Notes d'entomologie marocaine XLIX. Les *Cycloderes* du Maroc (Coleoptera Curculionidae). Mém. Mus. Hist. nat., Paris (N.S.) 28 1949 pp. 73–132, 36 figs.

56.—**Antoine, M.** Notes d'entomologie marocaine LII. Rev. franç. Ent., Paris 17 1950 pp. 285–290. [Col.]

57.—**Apolinar María, H.** Miscelánea entomológica. V. Rev. Acad. colombiana, Bogota 7 1950 pp. 468–473, 1 col. pl. [Col.]

58.—**Araujo, R. L.** Contribuição para o conhecimento de *Polybia punctata* Buysson, 1908 (Hym. Vespidae). Arq. Inst. biol., São Paulo 19 (1949–50) 1950 pp. 269–273, 3 figs.

59.—[**Arens, L. E.**] Certain results of investigations on the behavior of solitary wasps *Odynerus*. [In Russian.] C.R. Acad. Sci. URSS, Moscow (N.S.) 70 1950 pp. 733–736. [Hym.]

60.—**Arnal, A.** El aparato digestivo y la digestión en los culícidos hematófagos. Trab. Inst. Cienc. nat. José de Acosta, Madrid (Ser. Biol.) 2 1950 pp. 303–364, 20 pls. 21 figs. [Dipt.]

61.—**Arnason, A. P., Fuller, R. A. & Spinks, J. W. T.** An electronic method of tracing the movements of soil-inhabiting insects. Science, Lancaster, Pa. 111 1950 pp. 5–6, 2 figs.

Arnason, T. J. see Irwin, Spinks & Arnason.

62.—**Arnaud, P. H.** Record of the genus *Procattharosia* in North America (Diptera: Tachinidae or Larvævoridae). Pan-Pacif. Ent., San Francisco 26 1950 p. 190,

63.—**Arnett, Jr., R. H.** Notes on the distribution, habits and habitats of some Panama Culicines (Diptera: Culicidae). J. New York ent. Soc. 58 1950 pp. 99–115, 2 pls. 1 chart.

64.—**Arnett, Jr., R. H.** Generic names of the beetle family Oedemeridae and their type species. J. Washington Acad. Sci. 40 1950 pp. 217–225. [Col.]

65.—**Arnett, R. H.** The Silphidae of the Philippine Islands (Coleoptera). Proc. ent. Soc. Washington 52 1950 pp. 63–69, 6 figs.

66.—**Arnold, G.** New Pompilidae from Kilimandjaro. Occ. Pap. Mus. S. Rhod., Cambridge 2 1950 pp. 400–401. [Hym.]

67.—[**Arnol'di, K. V.**] Contributions to the biology of certain cereal bugs—Pentatomids—in the Crimea in connection with questions of the dynamics of the abundance of their populations. [In Russian.] C.R. Acad. Sci. URSS, Moscow (N.S.) 60 1948 pp. 173–176. [Hem.]

[**Arnol'di, K. V. & L.V.**] see Pavlovskii & Vinogradov.

Arouck, R. see Damasceno & Arouck; Damasceno, Arouck & Causey.

68.—**Arvy, L. & Gabe, M.** Données histologiques sur l'organe photogène chez la larve de *Pelania mauritanica*. Ann. Sci. nat., Paris (11) 11 1949 pp. 263–268, 1 pl. [Col.]

69.—**Arvy, L., Gabe, M. & Lhoste, J.** Action de quelques insecticides sur le sang du doryphore (*Chrysomela decemlineata* Say). Bull. Soc. ent. France, Paris 55 1950 pp. 122–127, 12 figs. [Col.]

70.—**Asahina, S.** On the life-history of *Epiophlebia superstes* (Odonata, Anisozygoptera). Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 337–341, 4 figs.

71.—**Ash, J.** Records of *Ornithomya* spp. (Dipt., Hippoboscidae) from Berkshire and Co. Durham in 1949. Ent. mon. Mag., London 86 1950 pp. 86–87.

72.—**Aubert, J.** L'origine et l'évolution des insectes. Bull. Soc. vaud. Sci. nat., Lausanne 64 1950 no. 277 pp. 461–477, 22 figs.

73.—Aubert, J. Les Plécoptères de la Suisse romande. C.R. 13e Congr. int. Zool. Paris 1948, 1949 p. 468.

74.—Aubert, J. La répartition des Plécoptères dans le monde. C.R. 13e Congr. int. Zool. Paris 1948, 1949 pp. 468–469.

75.—Aubert, J. *Nemoura undulata* Ris, un Plécoptère mal connu des Alpes suisses. Mitt. schweiz. ent. Ges., Berne **23** 1950 pp. 65–66, 4 figs.

76.—Aubert, J. Note sur les Plécoptères européens du genre *Taeniopteryx* Pictet (*Nepheloptyryx* Klapalek) et sur *Capnia vidua* Klapalek. Mitt. schweiz. ent. Ges., Berne **23** 1950 pp. 303–316, 37 figs.

77.—Auclair, J. L. & Maltais, J. B. Etude de la résistance des plantes aux Aphidiens par la méthode de chromatographie. Rev. canad. Biol., Montreal **9** 1950 pp. 332–335. [Hem.]

78.—Auclair, J. L. & Patton, R. L. On the occurrence of d-alanine in the haemolymph of the milkweed bug, *Oncopeltus fasciatus*. Rev. canad. Biol., Montreal **9** 1950 pp. 3–8. [Hem.]

79.—Audent, H. L. F. Bristol insect fauna. Diptera (contd.). Proc. Bristol Nat. Soc. **28** 1950 pp. 45–132.

80.—Audras, G. & Thérond, J. Catalogue des Histérides de la région Lyonnaise. Bull. Soc. linn. Lyon **19** 1950 pp. 138–143. [Col.]

81.—Auerbach, C. SH poisoning and mutation. Experientia, Basle **6** 1950 pp. 17–18. [Dipt.]

82.—Autrum, H. Die Belichtungspotentiale und das Sehen der Insekten (Untersuchungen an *Calliphora* und *Dixippus*). Z. vergl. Physiol., Berlin **32** 1950 pp. 176–227, 31 figs. [Dipt.]

83.—Autrum, H. & Stoecker, M. Die Verschmelzungsfrequenzen des Bienenauges. Z. Naturf., Tübingen **5b** 1950 pp. 38–43, 8 figs. [Hym.]

84.—Autrum, H. & Stumpf, H. Das Bienenauge als Analysator für polarisiertes Licht. Z. Naturf., Tübingen **5b** 1950 pp. 116–122, 3 figs. [Hym.]

85.—Autuori, M. Contribuição para o conhecimento da Saúva (*Atta* spp. — Hymenoptera-Formicidae). V — Número de formas aladas e redução dos saúveiros iniciais. Arq. Inst. biol., São Paulo **19** (1949–50) 1950 pp. 325–331.

Aycock, J. F. see Bick & Aycock; Bick, Aycock & Orestano.

Azagra see Rodriguez Azagra.

Aziz, A. see Qadri & Aziz.

86.—Aziz, M. A. & Sitaraman, N. L. Studies on the *Dinoderus* borer in bamboo, Parts I, II. Proc. Indian Acad. Sci., Bangalore **28B** 1948 pp. 99–101, 1 fig., 102–105, 2 figs. [Col.]

87.—Baba, K. A study of Anopheline mosquitoes in relation to the epidemiology of malaria in Canton delta, South China. Trans. Kansai ent. Soc., Nishinomiya **15** 1950 pt. 2 pp. 1–11. [Dipt.]

88.—Babers, F. H. & Pratt, jr., J. J. Studies on the resistance of insects to insecticides. I. Cholinesterase in house flies (*Musca domestica* L.) resistant to D.D.T. Physiol. Zool., Chicago **23** 1950 pp. 58–63, 2 figs. [Dipt.]

89.—Bachmann, F. & Geier, P. Einige für die Schweiz neue oder wenig bekannte Cocciden aus der Unterfamilie der Diaspidinae (Homopt. Diaspidoid.). Mitt. schweiz. ent. Ges., Berne **23** 1950 pp. 117–119.

90.—Bachstet, M. & Deschamps, I. Notas sobre drogas, plantas y alimentos mexicanos. XI. Distribución de los aminoácidos en proteínas de huevos de insectos (ahuaute). Ciencia, Mexico D.F. **10** 1950 pp. 81–83, 2 figs. [Hem.]

91.—Badonnel, A. Croisière du Bougainville aux îles australes françaises. XIV. Psocoptères. Mém. Mus. Hist. nat., Paris (N.S.) **20** 1947 pp. 25–30, 15 figs.

92.—Baerends, G. P. Specializations in organs and movements with a releasing function. Symposia Soc. exp. Biol., Cambridge no. 4 1950 pp. 337–360, 7 figs.

- 93.—Baerends, G. P. & Baerends-van Roon, J. M. Embryological and ecological investigations on the development of the egg of *Anmophila campestris* Jur. *Tijdschr. Ent.*, Amsterdam **92** (1949) 1950 pp. 53–112, 68 figs. [Hym.]
- 94.—Baeta Neves, C. M. Lista dos insectos da biocenose do sobreiro (*Quercus suber* L.). *Bol. Soc. portug. Ciênc. nat.*, Lisbon **18** 1950 pp. 33–46, 1 pl.
- Bailey, R. S. see Bohart, Knowlton & Bailey.
- 95.—Bair, T. D. Experimental determination of the autoselected temperature in the chicken louse, *Cycloctogaster heterographus* (Nitzsch). *Ecology*, Durham, N.C. **31** 1950 pp. 474–477, 1 fig. [Malloph.]
- 96.—Baisas, F. E. & Pagayon, A. U. Notes on Philippine mosquitoes. XV. The chaetotaxy of the pupae and larvae of *Tripteroides*. Philipp. J. Sci., Manila **78** (1949) 1950 pp. 43–72, 4 pls. [Dipt.]
- 97.—Baker, P. H. The relationship between temperature, rate of development and expression of the Pufdi gene in *Drosophila melanogaster*. *Amer. Nat.*, Lancaster, Pa. **84** 1950 pp. 51–70, 2 figs. [Dipt.]
- 98.—Baker, W. K. & Sgourakis, E. The effect of oxygen concentration on the rate of X-ray induced mutations in *Drosophila*. *Proc. nat. Acad. Sci. U.S.A.*, Washington **36** 1950 pp. 176–184, 3 figs. [Dipt.]
- 99.—Balachowsky, A. Les cochenilles de France, d'Europe, du nord de l'Afrique et du bassin méditerranéen. V. Monographie des Coccoïdea. Diaspidinae (deuxième partie). Aspidiotti. Actualités sci. indust., Paris no. 1087 1950 163 pp. 41 pls. [Hem.]
- 100.—Balachowsky, A. Sur deux *Tachardina* Ckll. (Coccoidea-Laccerinae) nouveau du Sahara central. *Eos*, Madrid **26** 1950 pp. 7–17, 4 pls. 1 map. [Hem.]
- 101.—Balachowsky, L. Contribution à l'étude de l'Aïr Hémiptères Coccoïdae. *Mém. Inst. franç. Afr. noire*, Paris no. 10 1950 p. 313.
- 102.—Balachowsky, A. Remarques biogéographiques sur l'aire de répartition mondiale du G. *Kermes* (Hom. Coccoidea). *Proc. 8th int. Congr. Ent.* Stockholm 1948, 1950 pp. 342–346, 1 map.
- 103.—Balachowsky, A. Les *Kermes* (Hom. Coccoidea) des chênes en Europe et dans le bassin méditerranéen. *Proc. 8th int. Congr. Ent.* Stockholm 1948, 1950 pp. 739–754, 6 pls.
- 104.—Balachowsky, A. Sur un *Parlagena* (Hom. Coccoidea) nouveau du Beloutchistan iranien. *Rev. Path. vég. Ent. agric. Fr.*, Paris **29** 1950 pp. 17–20, 1 pl.
- 105.—Balachowsky, A. & Gossein, M. T. Conservation et préparation microscopique des cochenilles et des pucerons. *Entomologiste*, Paris **5** 1950 pp. 40–47.
- 106.—Balazuc, J. Triongulins monstrueux (Col. Meloidae). *Bull. Soc. ent. France*, Paris **55** 1950 pp. 50–57, 2 figs.
- 107.—Balazuc, J. La tératologie des Coléoptères et expériences de transplantation chez *Tenebrio molitor*. *Mém. Mus. Hist. nat.*, Paris (N.S.) **25** 1948 pp. 1–293, 223 figs.
- 108.—Balduf, W. V. Utilization of food by *Sinea diadema* (Fabr.) (Reduviidae, Hemiptera). *Ann. ent. Soc. Amer.*, Columbus **43** 1950 pp. 354–360.
- 109.—Balduf, W. V. A summary of studies on the ambush bug *Phymata pennsylvanica americana* Melin (Phymatidae Hemiptera). *Trans. Illinois Acad. Sci.*, Springfield **41** 1948 pp. 101–106.
- 110.—Baldwin, W. F. & Coppel, H. C. The biology of *Phorocera hamata* A. & W., a Tachinid parasite of sawflies. *Canad. Ent.*, Guelph **81** (1949) 1950 pp. 237–245, 16 figs. [Dipt.]
- 111.—Balfour-Browne, F. The water beetles found in the Counties of Cheshire, Flintshire, Denbighshire, Caernarvonshire, Anglesey, Merionethshire and Montgomeryshire. *Proc. Chester Soc. nat. Sci.* **3** 1950 pp. 81–124. [Col.]

112.—**Balfour-Browne, J.** Palpicornia. Explor. Parc nat. Albert, Miss. de Witte (1933–1935), Brussels fasc. 63 1950 84 pp. 22 figs. [Col.]

113.—**Balfour-Browne, J.** On the aquatic Coleoptera of Northern Rhodesia (Dytiscidae, Gyrinidae and Palpicornia). Occ. Pap. Mus. S. Rhodesia, Cambridge 2 1950 pp. 359–399, 41 figs.

114.—**Balinsky, B. I.** On the Plecoptera of the Caucasus. Trans. R. ent. Soc. London 101 1950 pp. 59–87, 21 figs.

115.—**Balogh, I.** Neue faunistische Angaben aus der Familie Pyralididae (Lepidoptera) II. Folia ent. hung., Budapest 7 1942 pp. 106–109.

116.—**Balthasar, V.** Opuscula hymenopterologica IX. Acta Soc. ent. Čsl., Prague 47 1950 pp. 26–38, 4 figs.

Bandyspadhyay, K. S. see Khanna, Nigam, Sehgal & Bandyspadhyay.

117.—**Banks, N.** Notes and descriptions of western Chrysopidae (Neuroptera). Psyche, Cambridge, Mass. 57 1950 pp. 45–66, 2 pls.

118.—**Banks, N.** A new species of Limnephilidae from Maine (Trichoptera). Psyche, Cambridge, Mass. 57 1950 pp. 72–73, 1 fig.

119.—**Bänninger, M.** Die Rassen der *Nebria (Ne briola) cordicollis* Chd. und ihre Verbreitung. Ent. Bl., Krefeld 45–46 (1949–1950) 1950 pp. 1–9, 1 map. [Col.]

120.—**Bänninger, M.** The subtribe Pasimachina (Coleoptera, Carabidae, Scaritini). Rev. Ent., Rio de Janeiro 21 1950 pp. 481–512.

121.—**Barber, H. S.** Notes on *Brontispa* in Micronesia (Coleoptera, Chrysomelidae). J. Wash. Acad. Sci., Baltimore 40 1950 pp. 245–247.

122.—**Bari, B.** Revisione dei *Dyschirius* del subgen. *Reicheiodes* Gglb. a descrizione di due nuove specie italiane (Coleoptera: Scaritinae). Boll. Soc. ent. ital., Genoa 80 1950 pp. 36–39, 6 figs.

123.—**Barigozzi, C.** Le fondament génétique de la réaction à la lumière chez la Drosophile. Arch. Klaus-Stift. Vererb-Forsch. Zürich 22 (1947) 1948 pp. 346–348. [Dipt.]

124.—**Barigozzi, C.** Le rôle du chromosome Y chez *Drosophila melanogaster*. Arch. Klaus-Stift. Vererb-Forsch. Zürich 25 1950 pp. 28–33, 6 figs. [Dipt.]

125.—**Barigozzi, C.** Analyse der genetischen Grundlage eines funktionellen Merkmals (Lichtreaktion) bei *Drosophila melanogaster*. Verh. dtsch. Zool. Mainz 1949, Leipzig 1950 pp. 27–31, 5 figs. [Dipt.]

126.—**Barlet, J.** La question des pièces pleurales du thorax des Machilides (Thysanoures). Bull. Ann. Soc. ent. Belg., Brussels 86 1950 pp. 179–190, 4 figs.

127.—**Barlet, J.** Sur la constitution des boucliers notaux des Machilides. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 535–540, 2 figs. [Thysanura.]

128.—**Barnes, H. F.** The identity of the swede midge, with notes on its biology. Ann. appl. Biol., London 37 1950 pp. 241–248. [Dipt.]

129.—**Barnes, H. F.** The need for biological investigations in the specific determination of gall midges. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 106–110. [Dipt.]

130.—**Barnes, R. C., Fellton, H. L. & Wilson, C. A.** An annotated list of the mosquitoes of New York. Mosq. News, Albany, N.Y. 10 pp. 69–84. [Dipt.]

131.—**Barr, W. F.** Systematic and synomical notes on New World Clerid beetles (Coleoptera). Ent. Ber., Amsterdam 13 1950 pp. 61–62.

132.—**Barr, W. F.** Contributions toward a knowledge of the insect fauna of Lower California. No. 12 Coleoptera: Cleridae. Proc. Calif. Acad. Sci., San Francisco (4) 24 1950 pp. 485–519.

133.—**Barreto, M. P.** Contribuição para o estudo dos Bruchomyiinae brasileiros, com as descrições de duas novas espécies (Diptera, Psychodidae). Papéis avulsos Dep. Zool., São Paulo 9 1950 pp. 341–350, 16 figs.

134.—**Barros, R. de.** A new species of the genus *Drosophila*, with discussion about speciation in the *mercatorium* sub-group. Rev.

brasil. Biol., Rio de Janeiro **10** 1950 pp. 265–278, 29 figs. [Dipt.]

135.—**Barter, G. W. & Brown, W. J.** On the identity of *Agrius anguis* Gory and some allied species (Coleoptera : Buprestidae). Canad. Ent., Guelph **81** (1949) 1950 pp. 245–249, 1 fig.

136.—**Barth, R.** Die maennlichen Duftorgane von *Papilio polystrictus* Btlr. und *proneus* Hbn. (Lepidoptera), zugleich ein Beitrag zum feineren Bau der Duftschuppen. Rev. Ent., Rio de Janeiro **21** 1950 pp. 513–535, 16 figs.

137.—**Barth, R.** Vergleichend morphologische Studien über die Duftschuppen der Pieridae *Pieris brassicae* und *Pieris rapae* und der Satyrine *Coenonympha pamphilus*. Zool. Jb., Jena (Anat.) **70** 1949 pp. 397–426, 31 figs. [Lep.]

138.—**Barthe, R.** L'aile membranuse des Carabini (première note) *Orinocarabus (Archicarabus) nemoralis* O.F. Müller. Rev. franç. Ent., Paris **17** 1950 pp. 188–192, 2 figs. [Col.]

139.—**Basden, J. F.** A method of distinguishing the larval stages of *Agriotes sputator* (L.) (Col., Elaterid.). Bull. ent. Res., London **41** 1950 pp. 395–413, 6 figs.

140.—**Basilewsky, P.** Révision générale des Harpalinae d'Afrique et de Madagascar (Coleoptera, Carabidae). Première partie. Ann. Mus. Congo belge, Tervuren (Sér. 8°) Sci. zool. **6** 1950 283 pp. 9 pls. 198 figs.

141.—**Basilewsky, P.** Carabidae africains nouveaux des Musées de Gênes et de Milan. Ann. Mus. Stor. nat., Genova **64** 1949 pp. 1–11, 9 figs.

142.—**Basilewsky, P.** Révision des Anchomeninae (Coleoptera Carabidae) de l'Afrique du Sud. Ark. Zool., Stockholm (2) **1** 1950 pp. 275–299, 28 figs.

143.—**Basilewsky, P.** Description d'un nouveau *Philorrhizus*, recueilli en Erythrée par Mr. de Lotto (Coleoptera : Carabidae). Boll. Soc. ent. ital., Genoa **80** 1950 pp. 34–35.

144.—**Basilewsky, P.** Etudes sur les Chlaeniens d'Afrique (Col. Carabidae). Bull. Ann. Soc. ent. Belg., Brussels **86** 1950 pp. 40–54.

145.—**Basilewsky, P.** Description d'un *Orinodromus* nouveau des hauts sommets du Kilimandjaro (Col. Carabidae). Bull. Ann. Soc. ent. Belg., Brussels **86** 1950 pp. 118–120, 2 figs.

146.—**Basilewsky, P.** Descriptions de Coléoptères Carabidae nouveaux d'Afrique et notes diverses sur des espèces déjà connues. VI. Bull. Soc. ent. France, Paris **55** 1950 pp. 78–80, 1 map.

147.—**Basilewsky, P.** Notes sur quelques Cétoines du Congo belge. Lambillionea, Brussels **50** 1950 pp. 33–38, 1 map. [Col.]

148.—**Basilewsky, P.** Contribution à l'étude de l'Air. Coléoptères Carabidae. Mém. Inst. franç. Afr. noire, Paris no. 10 1950 pp. 231–260, 1 fig.

149.—**Basilewsky, P.** Mission scientifique de l'Omo. Coleoptera XIV. Carabidae. Mém. Mus. Hist. nat., Paris (N.S.) **20** 1948 pp. 189–222, 18 figs.

150.—**Basilewsky, P.** Etudes sur les Chlaeniens d'Afrique. (Col. Caraboidae Callistidae). Mém. Mus. Hist. nat., Paris (N.S.) **28** 1949 pp. 133–166, 3 pls.

151.—**Basilewsky, P.** Etudes sur les Chlaeniens d'Afrique. III, IV (Coleoptera Callistidae). Rev. franç. Ent., Paris **17** 1950 pp. 109–135, 26 figs.; 184–188, 5 figs.

152.—**Basilewsky, P.** *Cétonides nouveaux du Congo belge, de la tribu des Cremastochilini. Rev. Zool. Bot. afr., Brussels **43** 1950 pp. 164–175, 1 fig. [Col.]

153.—**Basilewsky, P.** Descriptions de deux Prionides nouveaux du Congo belge (Col. Cerambycidae). Rev. Zool. Bot. afr., Brussels **43** 1950 pp. 176–181.

154.—**Basilewsky, P.** Descriptions de deux Coléoptères myrmécophiles nouveaux du Katanga représentants d'une famille encore inconnue en Afrique centrale (Col. Cossyphodidae). Rev. Zool. Bot. afr., Brussels **43** 1950 pp. 182–187, 4 figs.

155.—**Basilewsky, P.** Description de deux *Carabidomennus* nouveaux du Katanga (Col. Paussidae). Rev. Zool. Bot. afr., Brussels **43** 1950 pp. 197–202, 1 fig.

156.—**Basilewsky, P.** Nouveaux Cossyphodides du Congo belge (Col. Cossyphodidae). Rev. Zool. Bot. afr., Brussels **43** 1950 pp. 240–243, 2 figs.

157.—**Basilewsky, P.** Coléoptères Carabidae africains nouveaux. IV. Rev. Zool. Bot. afr., Brussels **43** 1950 pp. 251–259, 7 figs.

158.—**Basilewsky, P.** Le genre *Dendragonum* Burgeon (Col. Carabidae). Rev. Zool. Bot. afr., Brussels **44** 1950 pp. 19–24, 6 figs.

159.—**Basilewsky, P.** Description d'un Prionien nouveau du Congo belge (Col. Cerambycidae). Rev. Zool. Bot. afr., Brussels **44** 1950 pp. 56–58, 1 fig.

160.—**Basilewsky, P.** Un *Cossyphodes* nouveau du Kivu (Col. Cossyphodidae). Rev. Zool. Bot. afr., Brussels **44** 1950 pp. 59–60.

161.—**Basilewsky, P. & Straneo, S. L.** Descriptions de Coléoptères Carabidae nouveaux du Congo belge découverts par M. N. Leleup. Rev. Zool. Bot. afr., Brussels **43** 1950 pp. 188–196, 1 fig.

162.—**Basse-Korf, M.** Die Stabwanze (*Ranatra linearis* L.). Nachr. Sammelst. Schmarotzerbestimm., Aschaffenburg 1950 no. 29 pp. 1–4, 4 pls. [Hem.]

Basse-Korf, M. see Stadler & Basse-Korf.

163.—**Basu, A. C.** Experiments on the pupa formation of *Prodenia litura* Fabr. (Lepidoptera: Noctuidae) a pest of cauliflower in West Bengal. Proc. zool. Soc. Bengal, Calcutta **2** 1949 pp. 73–79.

164.—**Bateman, A. J.** Is gene dispersal normal? Heredity, London **4** 1950 pp. 353–363, 3 figs.

165.—**Bateman, A. J. & Sinclair, W. K.** Mutations induced in *Drosophila* by ingested phosphorus-32. Nature, London **165** 1950 pp. 117–119. [Dipt.]

166.—**Battacharya, P.** Behaviour of the ring-chromosome in *Drosophila melanogaster*. Proc. roy. Soc. Edinburgh **64** 1950 pp. 199–215. [Dipt.]

167.—**Battaglia, B.** Ricerche sul metabolismo degli acidi nucleici nella spermatogenesi degli Ortotteri (Acridae). Riv. Biol. Perugia (N.S.) **42** 1950 pp. 27–43, 1 pl. 2 figs.

168.—**Battaglia, E.** Sulla terminologia dei processi meiotici. 2°. Contributo : Meiosi nei Coccidi (Coccoidea-Homoptera). Caryologia, Pisa **3** 1950 pp. 47–71, 7 figs.

169.—**Battaglia, E.** Considerazioni sopra i più noti reperti di "fenomeni meiotici" in tessuti somatici. Caryologia, Pisa **3** 1950 pp. 79–112, 1 fig. [Dipt.]

170.—**Baudoin, R.** Un Hyménoptère nouveau pour la zone intercotidale de Roscoff. C.R. 13e Congr. int. Zool. Paris 1948, 1949 pp. 469–470.

171.—**Bauer, H.** Gekoppelte Vererbung bei *Phryne fenestralis* und die Beziehung zwischen Faktorenaustausch und Chiasmabildung. Biol. Zbl., Leipzig **65** 1946 pp. 108–114, 2 figs. [Lep.]

Baxter, A. T. see Peacock & Baxter.

172.—**Bayard, A.** Les caractéristiques morphologiques des *Procris* français. Rev. franç. Lép., Paris **12** 1950 pp. 289–318, 34 figs.

173.—**Bayard, A. & Verrier, M. L.** Note sur *Ecdyonurus lateralis* Curtis et la morphologie comparée des Ecdyonuridae (Ephéméroptères). Bull. Soc. zool. France, Paris **75** 1950 pp. 84–90, 2 figs.

174.—**Bazyluk, K. W.** Materials concerning the fauna of Orthoptera in western Poland. [In Polish with English summary.] Badan. fizjogr. poznań. Tow. Przyj. Nauk **2** 1950 pp. 136–156.

175.—**Bazyluk, W.** Notice sur les Orthoptères et Dermoptères des environs de Poznan. [In Polish with French summary.] Badan. fizjogr. poznań. Tow. Przyj. Nauk **1** 1948 pp. 154–159.

- 176.—**Bazyluk, W.** *Barbitistes constrictus* Br. Watt. in Western Poland, its distribution and some biological notes. [In Polish with English summary.] Polsk. Pismo ent., Wrocław **19** (1949) 1950 pp. 213–220, 1 map. [Orth.]
- 177.—**Beadle, L. C. & Shaw, J.** The retention of salt and the regulation of the non-protein nitrogen fraction in the blood of the aquatic larva, *Sialis lutaria*. J. exp. Biol., London **27** 1950 pp. 96–109, 5 figs. [Megalopt.]
- 178.—**Beal, jr., R. S.** Systematic notes on the genus *Formicilla* in the United States and Mexico(Coleoptera: Anthicidae). Pan-Pacif. Ent., San Francisco **26** 1950 pp. 122–130.
- 179.—**Beall, G.** The fat content of a butterfly, *Danaus plexippus* Linn., as effected by migration. Ecology, Durham, N.C. **27** 1948 pp. 80–94, 2 figs. [Lep.]
- Beament, J. W. L.** see Wigglesworth & Beament.
- 180.—**Beamer, R. H.** A new species of *Delitanus*(Homoptera-Cicadellidae). J. Kansas ent. Soc., Manhattan **23** 1950 p. 63.
- 181.—**Beamer, R. H.** *Delphacodes detecta* (Van D.) and a new closely related species (Homoptera-Fulgoridae-Delphacinae). J. Kansas ent. Soc., Manhattan **23** 1950 pp. 68–70, 1 pl.
- 182.—**Beamer, R. H.** The genus *Bakerella* in North America north of Mexico (Homoptera-Fulgoridae-Delphacinae). J. Kansas ent. Soc., Manhattan **23** 1950 pp. 102–109, 7 figs.
- 183.—**Beamer, R. H.** Five new genera of Delphacine Fulgorids (Homoptera - Fulgoridae - Delphacinae). J. Kansas ent. Soc., Manhattan **23** 1950 pp. 128–133, 1 pl.
- 184.—**Beamer, R. H. & Michener, C. D.** Mutual relationships between leafhoppers and ants. J. Kansas ent. Soc., Manhattan **23** 1950 pp. 110–113, 1 fig. [Hem., Hym.]
- 185.—**Beard, R. L.** Experimental observations on coagulation of insect hemolymph. Physiol. Zool., Chicago **28** 1950 pp. 47–57.
- 186.—**Beaumont, J. de.** Notes sur quelques Sphecidae nord-africains décrits par G. Gribodo. Ann. Mus. Stor. nat., Genova **64** 1950 pp. 261–267.
- 187.—**Beaumont, J. de.** Sphecidae (Hymenoptera) récoltés en Algérie et au Maroc par M. Kenneth M. Guichard. Bull. Brit. Mus. (Nat. Hist.), London Ent. **1** 1950 pp. 389–427, 53 figs.
- 188.—**Beaumont, J. de.** Résultats de l'expédition de l'Armstrong Collège à l'oasis de Siwa (désert libyque), 1935, sous la direction du Professeur J. Omer-Cooper. Sphecidae (Hymenoptera). Bull. Soc. Fouad Ier Ent., Cairo **34** 1950 pp. 1–21.
- 189.—**Beaumont, J. de.** Note sur trois *Stizus* et un *Gorytes* d'Espagne (Hym. Sphecid.). Mitt. schweiz. ent. Ges., Berne **23** 1950 pp. 61–64, 9 figs.
- 190.—**Beaumont, J. de.** Synonymies de quelques *Cerceris*. I (Hym. Sphecid.). Mitt. schweiz. ent. Ges., Berne **23** 1950 pp. 317–328.
- 191.—**Bechyně, J.** Liste provisoire des Eumolpides de la République Argentine et observations diverses sur les Eumolpides de l'Amérique du Sud (Col., Chrysomeloidea). Acta zool. lilloana, Tucuman **8** 1949 pp. 457–535, 6 figs.
- 192.—**Bechyně, J.** Notes sur les Eumolpides de l'Amérique du Sud (Col. Phytophaga). Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 70–85, 3 figs., 1067–1091, 5 figs.
- 193.—**Bechyně, J.** Notes sur les Eumolpides néotropicaux des collections de l'Institut Royal des Sciences naturelles de Belgique. Bull. Inst. Sci. nat. Belg., Brussels **26** 1950 no. 54, 24 pp. 2 figs. [Col.]
- 194.—**Bechyně, J.** Eumolpides nouveaux de Madagascar (Col. Phytophaga). Bull. Soc. linn. Lyon **19** 1950 pp. 148–151.
- 195.—**Bechyně, J.** Tableau analytique des *Lactica* de Madagascar (Col. Phytophaga, Alticidae). Bull. Soc. linn. Lyon **19** 1950 pp. 220–224.
- 196.—**Bechyně, J.** 7^e contribution à la connaissance du genre *Chrysolina* Motsch. (Col. Phytophaga Chrysomelidae). Ent. Arbeiten,

Münich **1** 1950 (31 Dec.) pp. 47-185, 58 figs.

197.—Bechyné, J. Eumolpides américains nouveaux ou peu connus. Ent. Arb., München **1** 1950 pp. 205-236, 1 pl. [Col.]

198.—Bechyné, J. Notes sur les Chrysomeloidea de l'Amérique du Sud et du Centre (Col. Phytoph.). Ent. Arb., München **1** 1950 pp. 237-269, 9 figs.

199.—Bechyné, J. Notes sur les Eumolpides américains (Col. Phytophaga). Mitt. münchen. ent. Ges., Munich **40** 1950 pp. 245-263, 2 pls. 6 figs.

200.—Bechyné, J. Les générotypes des Eumolpides de l'Amérique du Sud et du Centre avec les diagnostics des formes nouvelles (Col. Phytoph. Chrysomeloidea). Mitt. münchen. ent. Ges., Munich **40** 1950 pp. 264-292, 2 figs.

201.—Bechyné, J. La liste des Chrysomeloidea capturés par M. W. Wittmer à Muri (Brésil): 1ère partie, Eumolpidae et Chrysomelidae (Col.). Mitt. münchen. ent. Ges., Munich **40** 1950 pp. 293-299.

202.—Bechyné, J. Nouvelles espèces de *Chrysolina*, subg. *Naluhiia* (Coleoptera, Chrysomelidae) de l'Afrique équatoriale. Publ. Serv. Cult. Mus. Dundo, Companhia Diamantes Angola, Lisbon 1950 11 pp. 3 figs.

203.—Bechyné, J. Notes sur les Chrysomélides de l'Amérique du Sud II (Col.). Rev. Ent., Rio de Janeiro **21** 1950 pp. 115-156, 15 figs.

204.—Bechyné, J. Les Chrysomélidae vrais du Congo belge (Col. Phytophaga). Rev. Zool. Bot. afr., Brussels **44** (30 Dec.) 1950 pp. 119-131.

205.—Beck, E. G. The histology and biology of the solidago gall caused by the larva of *Gnorimoschema gallaesolidaginis*. [Abstract.] Amer. J. Bot., Burlington **36** 1949 p. 794. [Lep.]

206.—Beck, L. H. & Miles, W. R. Some theoretical and experimental relationships between infra-red absorption and olfaction. Science, Baltimore **106** 1947 p. 511.

207.—Beck, S. D. Nutrition of the European corn borer, *Pyrausta nubilalis* (Hbn.). II. Some effects of diet on larval growth characteristics. Physiol. Zool., Chicago **23** 1950 pp. 353-361, 3 figs. [Lep.]

208.—Beck, S. D., Bilstad, N. M. & Lilly, J. H. Pre pupal changes in the ventricular epithelium of the European corn borer, *Pyrausta nubilalis* (Hbn.). Ann. ent. Soc. Amer., Columbus **43** 1950 pp. 305-310, 1 pl. [Lep.]

209.—Beck, S. D., Lilly, J. H. & Stauffer, J. F. Nutrition of the European corn borer, *Pyrausta nubilalis* (Hbn.). I. Development of a satisfactory purified diet for larval growth. Ann. ent. Soc. Amer., Columbus **42** (1949) 1950 pp. 483-496, 7 figs. [Lep.]

210.—Beck, S. D. & Stauffer, J. F. An aseptic method for rearing European corn borer larvae. J. econ. Ent., Menasha **43** 1950 pp. 4-6, 1 fig. [Lep.]

211.—Becker, E. R. Distribution of the tropical rat flea (*Xenopsylla cheopsis*) in the interior of the United States. Proc. Iowa Acad. Sci., Des Moines **54** 1947 pp. 297-300. [Siphonapt.]

212.—Becker, G. Metatelia bei Cerambyciden-Larven. Zool. Jb., Jena (Allg. Zool.) **62** 1950 pp. 93-101, 4 figs. [Col.]

213.—Beebe, W. Migration of Danaidae, Ithomiidae, Acraeidae and Heliconidae (butterflies) at Rancho Grande, north-central Venezuela. Zoologica, New York **35** 1950 pp. 57-68, 1 fig. [Lep.]

214.—Beebe, W. Home life of the bat falcon, *Falco albicularis albicularis* Daudin. Zoologica, New York **35** 1950 pp. 69-86.

215.—Beebe, W. Migration of Pieridae (butterflies) through Portachuelo Pass, Rancho Grande, North-central Venezuela. Zoologica, New York **35** 1950 pp. 189-196, 1 pl. [Lep.]

216.—Beermann, W. Chromosomenkonstanz bei *Chironomus*. Naturwissenschaften, Berlin **37** 1950 pp. 543-544, 2 figs. [Dipt.]

- 217.—Begg, M. & Robertson, F. W. The nutritional requirements of *Drosophila melanogaster*. J. exp. Biol., London **26** 1950 pp. 380–387. [Dipt.]
- 218.—Begg, M. & Sang, J. H. A method for collecting and sterilising large numbers of *Drosophila* eggs. Science, Lancaster, Pa. **112** 1950 pp. 11–12, 1 fig. [Dipt.]
- 219.—Behre, E. H. Annotated list of the fauna of the Grand Isle region 1928–1946. Occ. Pap. mar. Lab., Baton Rouge, La. no. 6 1950 66 pp. [Insects pp. 14–15.]
- 220.—[Bei-Bienko, G. Ya.] Fn. USSR. Insects: Blattodea. [In Russian.] Inst. Zool. Acad. sci. URSS, Moscow (N.S.) **40** 1950 343 pp. 132 figs. [Orth.]
- 221.—[Bei-Bienko, G. Ya.] New species and subspecies of Acridids (Orthoptera, Acrididae) from Baluchistan. [In Russian.] C.R. Acad. Sci. URSS, Moscow (N.S.) **60** 1948 pp. 497–499, 3 figs.
- 222.—[Bei-Bienko, G. Ya.] New straightwinged insects (Orthoptera) from the Caucasus and Iran. [In Russian.] C.R. Acad. Sci. URSS, Moscow (N.S.) **73** 1950 pp. 1089–1092, 3 figs.
- [Bei-Bienko, G. Ya.] see Pavlovskii & Vinogradov.
- 223.—Beier, M. Zwei neue Mantiden aus dem Congo. Ann. naturh. Mus. Wien **57** (1949–1950) 1950 pp. 258–262, 5 figs. [Orth.]
- 224.—Beier, M. *Aptera males rammei* n. gen. et spec., eine flügellose Mantide aus Mazedonien. Ent. Nachrbl. öst. schweiz. Ent., Vienna **2** 1950 pp. 61–63, 3 figs. [Orth.]
- 225.—Beier, M. Das Genus *Panoploscelis* Scudder (Orthopt.-Pseudophyllinae). Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 111–123, 14 figs.
- 226.—Beirne, B. P. The Canadian Cixiidae (Homoptera: Fulgoroidea). Canad. Ent., Guelph **82** 1950 pp. 93–101, 22 figs.
- 227.—Beirne, B. P. A new species of *Balclutha*, with notes on the Canadian Balcluthini (Homoptera: Cicadellidae). Canad. Ent., Guelph **82** 1950 pp. 123–126, 8 figs.
- 228.—Beirne, B. P. A new species of *Laccocera* from Canada and records of other Canadian species (Homoptera: Araeopidae). Canad. Ent., Guelph **82** 1950 pp. 173–174, 5 figs.
- 229.—Beirne, B. P. The Canadian species of *Epiptera* (Homoptera: Achilidae). Canad. Ent., Guelph **82** 1950 pp. 186–190, 17 figs.
- 230.—Beirne, B. P. The habitat-distribution of the British maritime Lepidoptera. J. Soc. Brit. Ent., Bournemouth **3** 1950 pp. 121–133.
- 231.—Beischer, D. E. Electronic radiography by transmission using radioactive monolayers. Science, Lancaster, Pa. **112** 1950 pp. 535–536, 2 figs.
- 232.—Belkin, J. N. A revised nomenclature for the chaetotaxy of the mosquito larva (Diptera: Culicidae). Amer. Midl. Nat., Notre Dame **44** 1950 pp. 678–698, 8 figs.
- 233.—Belkin, J. N. Mosquitoes of the genus *Tripteroides* in the Solomon Islands. Proc. U.S. nat. Mus., Washington, D.C. **100** 1950 no. 3262 pp. 201–274, 7 figs. [Dipt.]
- 234.—Bellamy, R. E. An unusual winter population of *Anopheles quadrimaculatus* Say. J. nat. Malar. Soc., Columbia, S.C. **9** 1950 pp. 80–83, 1 fig. [Dipt.]
- 235.—Bellamy, R. E. & Repass, R. P. Notes on the ova of *Anopheles georgianus* King. J. nat. Malar. Soc., Columbia, S.C. **9** 1950 pp. 84–88, 3 figs. [Dipt.]
- 236.—Bellemare, E. R. & Brunelle, L. Larval and pupal development of *Dermestes maculatus* Degeer under controlled conditions of temperature and relative humidity. Canad. Ent., Guelph **82** 1950 pp. 22–24. [Col.]
- 237.—Benander, P. Några *Stigmella*-minor (Lep. Tineina). [In Swedish with German summary.] Opusc. ent., Lund **15** 1950 pp. 97–110, 5 figs.
- 238.—Benesh, B. Descriptions of new species of stagbeetles from Formosa and the Philippines (Coleoptera: Lucanidae). Pan-Pacif. Ent., San Francisco **26** 1950 pp. 11–18, 49–57, 1 pl.

- 239.**—**Benick, G.** Eine neue deutsche *Lathrobium*-Art. Ent. Bl., Krefeld **45-46** (1949-1950) 1950 pp. 16-18, 2 figs. [Col.]
- 240.**—**Benick, L.** *Stenus tarsalis* Lj. und seine Sippe (Col., Staph.). Opusc. ent., Lund **15** 1950 pp. 113-119, 4 figs.
- 241.**—**Benick, L.** Das Schriftum zur Käferkunde Nordelbingens. Schr. naturw. Ver. Schleswig-Holstein, Kiel **23** 1942 pp. 176-251, 1 map. [Col.]
- 242.**—**Bennema, B. A. & Smelik, P. G.** De nestbouw van spinnende watertorren (*Hydrous piceus* en *Hydrophilus caraboides*). Levende Natuur, Amsterdam **53** 1950 pp. 21-29, 10 figs. [Col.]
- 243.**—**Bennett, N. H.** A revision of the *echerius* group of the genus *Abisara* Felder (Rhop. Riodinidae). Entomologist, London **83** 1950 pp. 1-9, 34-42, 21 figs.
- 244.**—**Benno, P.** De nederlandse goudwespen en haar verspreiding (Hym. Chrysididae, Cleptidae). Publ. natuurh. Genootsch. Limburg **3** 1950 pp. 9-48, 5 figs.
- 245.**—**Benoist, R.** Apides de l'A.O.F. communiqués par A. Villiers. Bull. Inst. franç. Afr. noire, Dakar **12** 1950 p. 629. [Hym.]
- 246.**—**Benoist, R.** Contribution à l'étude du peuplement de la Mauritanie. Apides recueillis en 1948-49 par MM. L. Berland et A. Villiers. Bull. Inst. franç. Afr. noire, Dakar **12** 1950 pp. 941-943. [Hym.]
- 247.**—**Benoist, R.** Notes sur quelques Apides (Hym.) paléarctiques. Bull. Soc. ent. France, Paris **55** 1950 pp. 98-102.
- 248.**—**Benoist, R.** Contribution à la connaissance des Hyménoptères Apides de Madagascar. Mém. Inst. sci. Madagascar, Tananarive **4A** 1950 pp. 97-104, 2 figs.
- 249.**—**Benoist, R.** Contribution à l'étude de l'Aïr. Hyménoptères Apidae. Mém. Inst. franç. Afr. noire, Paris no. 10 1950 pp. 306-313.
- 250.**—**Benoit, P. L. G.** Contribution à l'étude de la faune parasitaire de *Sylepta derogata* Fabricius (Lepid. Pyral.) au Congo belge. Bull. Ann. Soc. ent. Belg., Brussels **86** 1950 pp. 87-103.
- 251.**—**Benoit, P. L. G.** Stéphanides éthiopiens du Muséum national d'Histoire naturelle (Hym. Terebr.). Rev. franç. Ent., Paris **17** 1950 pp. 263-267.
- 252.**—**Benoit, P. L. G.** Evaniides éthiopiens du Muséum national d'Histoire naturelle. Rev. franç. Ent., Paris **17** 1950 pp. 267-271. [Hym.]
- 253.**—**Benoit, P. L. G.** Les espèces congolaises des genres *Sphecodes* Latr. et *Eupetersia* Blüthg. (Apidae). Rev. Zool. Bot. afr., Brussels **43** 1950 pp. 59-66.
- 254.**—**Benoit, P. L. G.** Les Trigonaloidae du Congo belge (Hym.-Terebr.). Rev. Zool. Bot. afr., Brussels **43** 1950 pp. 216-221.
- 255.**—**Benoit, P. L. G.** Nouveaux Drinidae du Congo belge. Rev. Zool. Bot. afr., Brussels **43** 1950 pp. 222-227, 8 figs. [Col.]
- 256.**—**Benoit, P. L. G.** Un Sapygide (Hym.) nouveau du Congo belge. Rev. Zool. Bot. afr., Brussels **43** 1950 pp. 267-268, 1 fig.
- 257.**—**Benoit, P. L. G.** Les Sclerogibbidae (Hym.-Acul.) éthiopiens. Rev. Zool. Bot. afr., Brussels **44** 1950 pp. 132-134.
- 258.**—**Benson, R. B.** Two new Swiss sawflies, a *Tenthredo* and a *Fenella* (Hymenoptera : Tenthredinidae). Proc. R. ent. Soc. London (B) **19** 1950 pp. 53-55, 2 figs.
- 259.**—**Benson, R. B.** An introduction to the natural history of British sawflies (Hymenoptera Symphyta). Trans. Soc. Brit. Ent., Bournemouth **10** 1950 pp. 45-142, 9 maps.
- 260.**—**Bequaert, J. C.** Notes on Hippoboscidae. 20. A revision of the Hippoboscidae of Chile (Diptera). Agric. tecn., Santiago de Chile **10** 1950 pp. 5-9.

- 261.—Bequaert, J. C. New records of North American Nemestrinidae; with description of a new *Hirmoneura* from Mexico (Diptera). Bull. Brooklyn ent. Soc. **45** 1950 pp. 8-9.
- 262.—Berg, C. O. *Hydrellia* (Ephydriidae) and some other acalyptrate Diptera reared from *Potamogeton*. Ann. ent. Soc. Amer., Columbus **43** 1950 pp. 374-398, 4 pls.
- 263.—Berg, C. O. Biology of certain Chironomidae reared from *Potamogeton*. Ecol. Monogr., Durham, N.C. **20** 1950 pp. 83-99, 2 pls. [Dipt.]
- 264.—Berg, C. O. Biology of certain aquatic caterpillars (Pyralidae: *Nymphula* spp.) which feed on *Potamogeton*. Trans. Amer. micr. Soc., Menasha **69** 1950 pp. 254-266. [Lep.]
- 265.—Berger, L. A. Catalogues raisonnés de la faune entomologique du Congo belge. Lépidoptères—Rhopalocères I. Fam. Papilionidae. Ann. Mus. Congo belge, Tervuren Zool. (3) Sect. ii **8** 1950 pp. 1-104.
- Berger, L. A. see Hemming & Berger.
- Berger, N. E. see Krijgsman, Dresden & Berger.
- 266.—Berger, W. Lebenssspuren schmarotzender Insekten an jung-tertiären Laubblättern. S.B. öst. Akad. Wiss., Vienna Abt. I **158** 1949 pp. 789-792, 1 pl. 2 figs. [Foss. Hym., Dipt.]
- Bergvall, J. R. see Palm & Bergvall.
- 267.—Berio, E. Terzo contributo alla conoscenza del gen. *Ozarba* Wlk. (Lep. Noctuidae). Sulla sistematica di alcune specie ascritte a questo genere. Ann. Mus. Stor. nat., Genova **64** 1950 pp. 131-157, 98 figs.
- 268.—Berio, E. Diagnosi di nuove specie di nottue (Lepid. Noctuidae=Agrotidae). Boll. Soc. ent. ital., Genoa **80** 1950 pp. 89-92, 1 fig.
- 269.—Berio, E. Descrizione dell' articolazione dell' addome sul torace nei Chrysidiidi. Mem. Soc. ent. ital., Genova **29** 1950 pp. 112-116, 9 figs. [Hym.]
- 270.—Berland, L. Quelques mots sur les fourmiliens. Entomologiste, Paris **5** (1949) 1950 pp. 146-152. [Neur.]
- 271.—Berland, L. Contribution à l'étude de l'Air. Hyménoptères Sphecoidea, Vespoidea, Ichneumonoidea. Mém. Inst. franç. Afr. noire, Paris no. 10 1950 pp. 294-301, 7 figs.
- 272.—Berland, L. Les sociétés des guêpes. Nature, Paris 1950 no. 3184 pp. 252-255, 4 figs. [Hym.]
- 273.—Bernard, F. Contribution à l'étude de l'Air. Hyménoptères Formicidae. Mém. Inst. franç. Afr. noire, Paris no. 10 1950 pp. 284-294, 1 fig.
- 274.—Bernardi, G. La variation géographique des *Leptidea sinapis* français (Lep. Pieridae). Bull. Soc. ent. Mulhouse **1950** 1950 pp. 41-44, 1 map.
- 275.—Bernardi, G. Les noms des Rhopalocères du "Systematisches Verzeichnis" de Denis et Schiffermüller. Bull. Soc. ent. Mulhouse **1950** 1950 pp. 61-63. [Lep.]
- 276.—Bernardi, G. Contribution à l'étude de l'Air. Lépidoptères Pieridae. Mém. Inst. franç. Afr. noire Paris no. 10 1950 pp. 265-267.
- 277.—Bernardi, G. Les Rhopalocères décrits par Geoffroy (Histoire abrégée des insectes qui se trouvent aux environs de Paris 1785). Rev. franç. Lép., Paris **12** 1950 pp. 278-281.
- 278.—Berner, L. The mayflies of Florida. Gainesville, Univ. Florida Press 1950 xii & 267 pp. 24 pls. 88 figs. 19 maps.
- 279.—Berner, L. Ethologie de *Fucellia maritima* Haliday (Diptère Anthomyinié). Bull. Mus. Hist. nat. Marseille **8** 1948 pp. 183-201, 1 pl.
- 280.—Bernhauer, M. Neue Staphyliniden aus Kostarika. Zool. Anz., Leipzig **138** 1942 pp. 1-27. [Col.]
- 281.—Berry, P. A. & Parker, H. L. Notes on parasites of *Sitona* in Europe, with especial reference to *Campogaster exigua* (Meig.) (Diptera, Larvaevoridae). Proc. ent. Soc. Washington **52** 1950 pp. 251-258, 2 pls.

282.—**Bertrand, H.** Chironomides pyrénées nouveaux pour la faune française. Bull. Soc. ent. France, Paris **55** 1950 pp. 11–12. [Dipt.]

283.—**Bertrand, H.** Captures et élevages de larves de Coléoptères aquatiques (11e note). Bull. Soc. ent. France, Paris **55** 1950 pp. 42–48, 7 figs.

284.—**Bertrand, H.** Récoltes de Coléoptères aquatiques (Hydrocanthares) dans les Alpes : observations écologiques. Bull. Soc. zool. Fr., Paris **74** (1949) 1950 pp. 330–341.

285.—**Bertrand, H.** Observations biologiques sur les larves des Hydrophilidae. Bull. Soc. zool. France, Paris **75** 1950 pp. 96–103, 1 fig. [Col.]

286.—**Bertrand, H.** Quelques remarques sur la biogéographie et l'écologie des insectes aquatiques (Coléoptères). C.R. Soc. Biogéogr., Paris **26** 1950 nos. 233–235 pp. 70–77.

287.—**Bertrand, H.** Les tufs à Chironomides de Pyrénées. Entomologiste, Paris **6** 1950 pp. 13–18, 1 fig.

288.—**Bertrand, H.** La nymphe de *Stygeropsis pubescens* Loew (Dipt. Tipulidae). Entomologiste, Paris **6** 1950 pp. 119–123, 9 figs.

289.—**Bertrand, H.** Contribution à l'étude de l'Air. Larves de Coléoptères aquatiques (Dytiscidae). Mém. Inst. franç. Afr. noire, Paris no. 10 1950 pp. 264–267.

290.—**Bertrand, H.** Récoltes de Diptères Chironomides dans les Pyrénées. Vie et Milieu, Paris **1** 1950 pp. 345–355.

291.—**Bertrand, H. & Verrier, M. L.** Contribution à l'étude de la faune des eaux douces de la région orientale des Pyrénées. Ephéméroptères. Vie et Milieu, Paris **1** 1950 pp. 217–234, 3 figs., 449–459.

Bertrand, H. see Grenier & Bertrand.

Besson, J. see Gairaudo & Besson.

292.—**Betrem, J. G.** Analysis of some elements of the Scoliid-fauna of the Malayan region. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 347–350. [Hym.]

293.—**Betts, F. N.** On a collection of butterflies from the Bippara frontier tract and the Subansiri area (northern Assam). J. Bombay nat. Hist. Soc. **49** 1950 pp. 488–502, 1 map. [Lep.]

294.—**Beutler, R.** Zeit und Raum im Leben der Sammelbiene. Naturwissenschaften, Berlin **37** 1950 pp. 102–105, 1 fig. [Hym.]

295.—**Beutler, R. & Opfinger, E.** Pollernernährung und Nosemabefall der Honigbiene (*Apis mellifica*). Z. vergl. Physiol., Berlin **32** 1950 pp. 383–421, 2 figs. [Hym.]

296.—**Bezsilla, L.** Neue Lepidopteren-Aberrationen aus der Umgebung von Budapest. [In Magyar with German summary.] Folia ent. hung., Budapest **8** 1943 pp. 68–70, 2 pls.

297.—**Bhasin, G. D.** A new species of Chrysomelidae (Insecta; Coleoptera). J. zool. Soc. India, Calcutta **2** 1950 pp. 133–134, 1 fig.

298.—**Bhatnagar, Satya Prakash.** Studies on *Apanteles Förster* (Vipionidae: parasitic Hymenoptera) from India. Indian J. Ent., New Delhi **10** (1948) 1950 pp. 133–203, 95 figs.

299.—**Bhatnagar, S. P.** A new Chalcid, *Euderus carpomyiae* sp. nov. (Insecta, Hymenoptera, Eulophidae), parasitic in the ber fruitfly in India. J. zool. Soc. India, Calcutta **2** 1950 pp. 135–136, 6 figs.

300.—**Bianchi, C., Caporiacco, L. di, Massera, M. G. & Valle, A.** Raccolte faunistiche della Grotta degli Spipola (Bologna). Comment. pontif. Acad. Sci., Vatican City **13** 1949 pp. 493–527, 22 figs.

301.—**Bick, G. H.** The dragonflies of Mississippi (Odonata; Anisoptera). Amer. Midl. Nat., Notre Dame **43** 1950 pp. 66–78, 1 fig.

302.—**Bick, G. H. & Aycock, J. F.** The life history of *Aphylla williamsi* Gloyd (Odonata, Aeschnidae). Proc. ent. Soc. Washington **52** 1950 pp. 26–32.

303.—**Bick, G. H., Aycock, J. F. & Orestano, A.** *Tauriphilia australis* (Hagen) and *Miathyria marcella* (Selys) from Florida and Louisiana

(Odonata, Libellulidae). Proc. ent. Soc. Washington **52** 1950 pp. 81–84, 1 fig.

304.—Biezanko, C. M. de. Sphingidae, Geometridae et Uraniidae de Pelotas e seus arredores. Pelotas, The author 1948 8 and 4 pp. [Lep.]

305.—Biezanko, C. M. de. Sobre algumas novas aberrações de *Colias lesbia pyrrhothea* Hüb., 1823—(primeira contribuição). Agros, Pelotas **2** 1949 no. 2, 4 pp. 1 pl. [Lep.]

Bilstad, N. M. see Beck, Bilstad & Lilly.

306.—Binaghi, G. Sull' *Agriotes paludum* Kiesenw. Interessante specie di Elateride raccolta dal dr. Egone Stolfa nell'Albania settentrionale. Atti Mus. Stor. nat. Trieste **17** 1949 pp. 108–112, 3 figs. [Col.]

307.—Binaghi, G. Una nuova specie di *Apobrythus* della Lucania e tabella di determinazione delle specie appenniniche. (Col. Pselaphidae). Boll. Lab. Ent. agr. Portici **9** 1950 pp. 243–252, 2 figs.

308.—Bird, M. J. Production of mutations in *Drosophila* using four aryl-2-halogenoalkylamines. Nature, London **165** 1950 pp. 491–492. [Dipt.]

309.—[Birshtein, Ya. I.] The fauna of the caves of western Transcaucasia. [In Russian.] Zool. Zh., Moscow **29** 1950 pp. 354–366.

Black, W. F. see Lejeune & Black.

310.—Blackie, J. E. H. The range and distribution of *Strymonidia pruni* (L.) (Lep. Lycaenidae). Entomologist, London **83** 1950 pp. 246–248.

311.—Blackwelder, R. E. Index to families of beetles in the Biologia Centrali-Americanana. Coleopt. Bull., Washington, D.C. **4** 1950 pp. 11–14, 23–24.

312.—Blair, K. G. Notes on the life history of *Sedina buettneri* Hering (Lep., Caradrinidae). Ent. mon. Mag., London **86** 1950 pp. 47–49.

313.—Blair, K. G. Some northern British Coleoptera, including *Nebria nivalis* Payk., a Carabid species not hitherto known from Britain. Ent. mon. Mag., London **86** 1950 pp. 219–220.

314.—Blake, D. H. The generic status of *Altica picta* Say, with descriptions of four closely related species (Coleoptera, Chrysomelidae). Proc. ent. Soc. Washington **52** 1950 pp. 178–183, 1 pl.

315.—Blake, D. H. A revision of the beetles of the genus *Myochrous*. Proc. U.S. nat. Mus., Washington, D.C. **101** 1950 no. 3271 pp. 1–64, 8 pls. [Col.]

316.—Blake, D. H. A new genus of flea beetles from the West Indies. Psyche, Cambridge, Mass. **57** 1950 pp. 10–25, 2 pls. [Col.]

317.—Blanchard, E. E. Tres nuevos parásitos de ootecas de arañas. An. Inst. Med. reg., Tucuman **3** 1950 pp. 45–51, 3 figs. [Hym.]

318.—Blanchard, E. E. Nuevos géneros y especies de insectos parásitos (Hymenoptera & Diptera) del Uruguay. Comun. zool. Mus. Hist. nat. Montevideo **2** 1947 no. 42, 19 pp. 7 figs.

319.—Blanchard, E. E. Un nuevo parásito del gorgojo del tabaco. Rev. Invest. agric., Buenos Aires **4** 1950 pp. 135–138, 1 fig. [Hym., Col.]

320.—Blaszyk, P. & Madel, W. Beitrag zur Ueberwinterung und Fortpflanzungsbiologie von *Blitophaga opaca* L. (Coleopt.). Z. angew. Ent., Berlin **31** 1950 pp. 455–472.

321.—Błeszyński, S. La faune des Lépidoptères de Podgórzki aux environs de Cracovie. Docum. physiogr. polon., Cracow no. 21 1950 52 pp.

Blewett, M. see Fraenkel, Blewett & Coles.

322.—Blöte, H. C. Wantsen, cicaden en bladvlooien, verzameld in 1949. Natuurh. Maandbl., Maastricht **39** 1950 pp. 18–21. [Hem.]

323.—Blöte, H. C. Over *Graphosoma lineatum* (L.) var. *italicum* (Muell.). Natuurh. Maandbl., Maastricht **39** 1950 pp. 113–115, 1 fig. [Hem.]

324.—Blumel, J. The action of radioactive phosphorus in *Drosophila*. Science, Lancaster, Pa. **111** 1950 pp. 205–206. [Dipt.]

325.—Blunck, H. Zur Kenntnis des Massenwechsels von *Pieris brassicae* L. mit Berücksichtigung des Dürrejahres 1947. Z. angew. Ent., Berlin **32** 1950 pp. 141–171, 5 figs. [Lep.]

326.—Blunck, H. Zur Biologie von *Paravespula germanica* (F.). Zool. Anz., Leipzig **142** 1943 pp. 51–55. [Hym.]

327.—Boczkowska, M. Les ennemis du Doryphore (*Leptinotarsa decemlineata* Say) et leur capacité destructive. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 597–599. [Col.]

Bodenstein, D. *see* Demerec, M.

328.—Bodine, J. H. The effects of sulfanilamide upon the oxygen uptake of mitotically active and blocked grasshopper embryos. Biol. Bull., Lancaster, Pa. **98** 1950 pp. 94–97, 2 figs. [Orth.]

329.—Bodine, J. H. The combined effects of 2,4-dinitrophenol, methylene blue and thiourea on the oxygen uptake of embryonic cells. Physiol. comp. oecol., The Hague **2** 1950 pp. 140–144, 5 figs. [Orth.]

330.—Bodine, J. H. The combined action of 2, 4-dinitrophenol and ethyl carbamate (urethane) on the oxygen uptake of embryonic cells. Physiol. Zool., Chicago **23** 1950 pp. 63–67, 8 figs. [Orth.]

331.—Bohart, G. E. Observations on the mating habits of Halictid bees (Hymenoptera: Apoidea). Pan-Pacific. Ent., San Francisco **26** 1950 pp. 34–35.

332.—Bohart, G. E., Knowlton, G. F. & Bailey, R. S. Some wild bees of Utah. Mimeogr. Ser. Utah agric. Exp. Sta., Logan no. 371 1950 10 pp. [Hym.]

333.—Bohart, R. M. A new species of *Orthopodomyia* from California (Diptera, Culicidae). Ann. ent. Soc. Amer., Columbus **43** 1950 pp. 399–404, 1 pl.

334.—Bohart, R. M. A synopsis of *Maricopodynerus* (Hymenoptera: Vespidae). Bull. Brooklyn ent. Soc. **45** 1950 pp. 17–25.

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335.—Bohart, R. M. Observations on snow mosquitoes in California (Diptera: Culicidae). Pan-Pacif. Ent., San Francisco **26** 1950 pp. 111–118.

336.—Böhm, O. Der Insektenpanzer. Pflanzenarzt, Vienna **3** 1950 no. 1 pp. 5–6, 1 fig., no. 2 pp. 5–6, 3 figs.

337.—Bollow, H. Zellulose-Acetat-Behälter als Ersatz für Laboratoriums- und Sammlungs-Gläser. Anz. Schädlingsk., Berlin **23** 1950 pp. 156–158, 12 figs.

338.—Bollow, H. Uebersicht über die Gliederfüssler (Articulata). Naturw. Grundbegr. landb. Praxis, Munich (Zool.) **7** 1950 8 pp., 49 figs.

339.—Bollow, H. Urinsekten (Apterygota). Naturw. Grundbegr. landb. Praxis, Munich (Zool.) **9** 1950 4 pp., 8 figs.

340.—Bollow, H. Schabenartige (Blattoidea). Naturw. Grundbegr. landb. Praxis, Munich (Zool.) **11** 1950 4 pp. 2 figs. [Orth.]

341.—Bollow, H. Schwere Schäden an den Wintersaaten in Bayern durch eine bisher unbekannte Getreidegallmücke. Pflanzenschutz, Munich **2** 1950 pp. 41–44, 6 figs. [Dipt.]

342.—Bollow, H. Zellulose-Acetat als Glasersatz im Laboratorium. Z. Pflanzenbau u. Pflanzenschutz, Munich **1** 1950 pp. 41–45, 13 figs.

Bollow, H. *see* Koegel, A.

343.—Bonadona, P. Les *Trogldromus* de la région de Séranon (Alpes-Maritimes) (Coleoptera Bathyosciitae). Publ. Mus. Hist. nat., Paris no. 10 1948 pp. 29–34, 2 figs.

344.—Bonadona, P. Un *Euconnus* nouveau des Alpes-Maritimes. Rev. franç. Ent., Paris **17** 1950 pp. 48–51, 12 figs. [Col.]

345.—Bondar, G. Notas entomológicas da Baía. XXII. Rev. Ent., Rio de Janeiro **21** 1950 pp. 449–480, 17 figs. [Col.]

Böni, A. *see* Fritz-Niggli & Böni.

n 3

346.—Bonnemaison, L. Influence de l'alimentation et de la lumière sur la reproduction sexuée du *Myzus persicae* (Hem. Aphidinae). C.R. Acad. Sci., Paris **230** 1950 pp. 136-137.

347.—Bonnemaison, L. Détermination épigamique du sexe chez les Aphidinae. C.R. Acad. Sci., Paris **230** 1950 pp. 411-413. [Hem.]

348.—Bonnemaison, L. Remarques sur les facteurs d'apparition des ailes chez les Aphididae. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 199-203, 1 graph. [Hem.]

Bonnet, A. see Tuzet, Bonnet & Cailar.

349.—Bonnet, D. D. The hybridization of *Aedes aegypti* and *Aedes albopictus* in Hawaii. Proc. Hawaii. ent. Soc., Honolulu **14** (1949) 1950 pp. 35-39. [Dipt.]

350.—Bonnier, G. & Lüning, K. G. X-ray induced dominant lethals in *Drosophila melanogaster*. Hereditas, Lund **36** 1950 pp. 445-456, 2 figs. [Dipt.]

Booth, C. O. see Kennedy & Booth.

351.—Borgmeier, T. Estudos sobre *Atta* (Hym. Formicidae). Mem. Inst. Oswaldo Cruz, Rio de Janeiro **48** 1950 pp. 239-263 (in German "Atta-Studien" pp. 265-292) 63 figs.

352.—Borgmeier, T. Revision der Gattung *Coniceromyia* Borgmeier, nebst Beschreibung von sechs neuen Arten (Dipt. Phoridae). Rev. Ent., Rio de Janeiro **21** 1950 pp. 281-299, 4 pls. 18 figs.

353.—Borgmeier, T. Die myrmecophile Phoridaengattung *Chelidophora* Borgmeier, nebst Beschreibung einer neuen Art aus Brasilien (Dipt. Phoridae). Rev. Ent., Rio de Janeiro **21** 1950 pp. 301-304, 1 fig.

354.—Borgmeier, T. A fêmea dichthadiiforme e os estádios evolutivos de *Simopelta pergandei* (Forel), e a descrição de *S. bicolor*, n. sp. (Hym. Formicidae). Rev. Ent., Rio de Janeiro **21** 1950 pp. 369-380, 20 figs.

355.—Borgmeier, T. Bemerkungen zu Dr. Creighton's Werk "The ants of North America", Rev. Ent.,

Rio de Janeiro **21** 1950 pp. 381-386. [Hym.]

356.—Borgmeier, T. Uma nova espécie do gênero *Neivamyrmex* Borgmeier (Hym. Formicidae). Rev. Ent., Rio de Janeiro **21** 1950 pp. 623-624, 4 figs.

357.—Borgmeier, T. Neue Gattungen und Arten termitophiler Staphyliniden aus Brasilien, nebst einem Katalog aller bisher aus der neotropischen Region beschriebenen Arten (Col. Staph.). Rev. Ent., Rio de Janeiro **21** 1950 pp. 625-676, 67 figs.

358.—Borgmeier, T. A new species of *Megaselia* from Brazil (Diptera: Phoridae). Wasmann J. Biol., San Francisco **8** 1950 pp. 359-361, 1 fig.

359.—[Borkhsenius, N. S.] Fauna of the USSR. Homoptera. Vol. VII. Suborders mealybugs and scales (Coccoidea). Family mealybugs (Pseudococcidae). [In Russian.] Moscow, Izd. Zool. Akad. Nauk SSSR (N.S.) no. 38 1949 382 pp. 378 figs.

360.—[Borkhsenius, N. S.] Mealybugs and scales of USSR. (Coccoidea). [In Russian.] Keys to Fauna of SSSR, no. 32 250 pp. 466 figs. Moscow, Zool. Acad. Sci. SSSR 1950. [Hem.]

361.—[Borkhsenius, N. S.] A new species of scale from Brazil (Insecta, Coccoidea, Asterolecaniidae). [In Russian.] C.R. Acad. Sci. URSS, Moscow (N.S.) **70** 1950 pp. 727-728, 2 figs. [Hem.]

362.—[Borkhsenius, N. S.] Contribution to the revision of the genus *Asterolecanium* (Targ.) Sign. (Insecta, Homoptera, Coccoidea). [In Russian.] C.R. Acad. Sci. URSS, Moscow (N.S.) **71** 1950 pp. 781-783, 1 fig.

363.—[Borkhsenius, N. S.] New genus and species of mealybugs and scale insects (Hom. Coccoidea) of the fauna of SSSR. [In Russian.] Ent. Obozr., Moscow **30** 1949 pp. 334-352, 47 figs.

[Borkhsenius, N. S.] see Pavlovskii & Vinogradov.

364.—Börner, C. Neue europäische Blattlausarten. Naumburg, The author 1950 19 pp. [Hem.]

365.—**Bosq, J. M.** Notas sobre un Longicornio chileno-argentino (Col. Cerambycidae). Arthropoda, Buenos Aires **1** 1950 pp. 377-378.

366.—**Bounhiol, J. J.** Essai de localisation d'un centre de métamorphose imaginaire chez *Bombyx mori* L. C.R. 13e Congr. int. Zool. Paris 1948, 1949 pp. 470-471. [Lep.]

367.—**Bourgin, P.** Les *Oryctes* de France et des pays voisins (Col. Scarabaeidae). Entomologiste, Paris **5** (1949) 1950 pp. 152-156.

368.—**Bourgin, P.** L'allotrophie au cours des élevages. Entomologiste, Paris **6** 1950 pp. 83-84.

369.—**Bourgogne, J.** Expériences d'hybridation dans le genre *Fumea* (Lep. Psychidae). Bull. Soc. ent. France, Paris **55** 1950 pp. 68-73.

370.—**Bourgogne, J.** L'appareil génital femelle de quelques Hepialidae (Lépidoptères). Bull. Soc. zool. Fr., Paris **74** (1949) 1950 pp. 284-291, 1 fig.

371.—**Bourgogne, J.** Remarques sur l'appareil génital femelle des Psychidae (Lépidoptères) et sur l'importance de sa structure en systématique. Bull. Soc. zool. France, Paris **75** 1950 pp. 104-109, 6 figs.

372.—**Bovey, P.** Déterminisme génétique des formes orange chez *Zygaena ephialtes* (L.). Arch. Klaus-Stift. VererbForsch. Zürich **23** (1948) 1949 pp. 499-503. [Lep.]

373.—**Bovey, P.** Deux formes nouvelles de *Zygaena ephialtes* (L.) obtenues par croisement. Arch. Klaus-Stift. VererbForsch. Zürich **25** 1950 pp. 35-38. [Lep.]

374.—**Bovey, P.** La variabilité des espèces et l'entomologie appliquée. Bull. Soc. vaud. Sci. nat., Lausanne **64** 1950 no. 276 pp. 401-416.

375.—**Bowen, V. T.** Manganese metabolism of social Vespidae. J. exp. Zool., Philadelphia, Pa. **115** 1950 pp. 175-205, 2 figs. [Hym.]

376.—**Box, H. E.** Investigaciones sobre los taladradores de la caña de azúcar (*Diatraea* spp.) en Venezuela. Informe del progreso durante 1947-1949. Bol. tec. Div. Ent. Minist. Agric. Venezuela, Caracas no. 2 1950

[5] 60 pp. multigraph 2 maps (1 fidg.) 1 chart. [Lep.]

377.—**Box, H. E.** Report upon specimens of *Diatraea* Guilding (Lepidoptera, Pyralidae) in the Cornell University collection. J. New York ent. Soc., Lancaster, Pa. **58** 1950 pp. 241-245.

378.—**Box, H. E.** The geographical and ecological distribution of some neotropical species of *Diatraea* Guild. (Lep., Pyral.) and certain of their parasites. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 351-357.

Boyd, W. M. see Weiss & Boyd.

379.—**Bradley, J. C.** A new Malagasy *Scolia*. Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 764-765. [Hym.]

380.—**Bradley, J. C.** The Ethiopian Scoliidae. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 358-360. [Hym.]

381.—**Bradley, J. D.** On the occurrence of *Tinea columbariella* Wocke (Lep. Tineidae) in England, with a description of the species. Entomologist, London **83** 1950 pp. 169-172, 4 figs.

382.—**Bradley, J. D., Collins, R. J. & Fletcher, D. S.** Contribution à l'étude de l'Air. Lépidoptères Nocturnes. Mém. Inst. franç. Afr. noire, Paris no. 10 1950 pp. 271-272.

Bradley, J. D. see Zimmerman & Bradley.

383.—**Braesch, S.** Sur les glandes annexes de la chambre périvulvaire de certains Gryllidae. C.R. Acad. Sci., Paris **230** 1950 pp. 329-331, 1 fig. [Orth.]

384.—**Brakman, P. J.** Mededelingen inzake het vliegvermogen van Nederlandse Carabiden. Ent. Ber., Amsterdam **13** 1950 pp. 50-52. [Col.]

385.—**Brandt, H.** Gerafflögler (Orthopteroidea). Naturw. Grundbegr. landb. Praxis, München (Zool.) **10** 1950 4 pp. 5 figs.

386.—**Brandt, H.** Blasenfüssler (Thysanoptera). Naturw. Grundbegr. landb. Praxis, München (Zool.) **12** 1950 4 pp., 6 figs.

- 387.—Braun, A. F. Leaf-mining Lepidoptera with special reference to methods of rearing. *Lepidopt. News*, New Haven **4** 1950 pp. 3–6.
- 388.—Brehm, V. Einige merkwürdige Zweiflüglerlarven der deutschen Süßwasserfauna. *Mikrokosmos*, Stuttgart **39** 1950 pp. 150–152, 3 figs. [Dipt.]
- 389.—Breland, O. P. Additional studies on the larvae of *Uranotaenia syntheta* Dyar and Shannon (Diptera: Culicidae). *Mosq. News*, Albany, N.Y. **10** 1950 pp. 25–28, 2 figs.
- 390.—Breny, R. L'action des ennemis naturels indigènes sur le Doryphore en Europe. *Parasitica*, Gembloux **6** 1950 pp. 23–35. [Col.]
- 391.—Breuer, M. E. & Pavan, C. Genitalia masculina de *Drosophila* (Diptera): grupo *annulimana*. *Rev. brasil. Biol.*, Rio de Janeiro **10** 1950 pp. 469–488, 113 figs.
- 392.—Breuning, S. Nouvelles formes de Lamiaires du Congo belge (Cerambycidae). *Ann. Mus. Congo belge, Tervuren* (Sér. 8^e) *Sci. zool.* **4** 1950 46 pp. [Col.]
- 393.—Breuning, S. Nouveaux Lamiaires du Musée de Gênes (Coleoptera, Cerambycidae). *Ann. Mus. Stor. nat., Genova* **64** 1950 pp. 170–201.
- 394.—Breuning, S. Entomological results from the Swedish Expedition 1934 to Burma and British India. Coleoptera: Cerambycidae, Lamiinae, recueillis par René Malaise. *Ark. Zool.*, Stockholm **42A** 1950 no. 15 21 pp. 1 map.
- 395.—Breuning, S. Quelques nouveaux Lamiaires (Coleoptera, Cerambycidae) du Riksmuseum. *Ark. Zool.*, Stockholm (2) **1** 1950 pp. 265–274.
- 396.—Breuning, S. Nouvelles formes de Lamiaires (troisième partie). *Bull. Inst. Sci. nat. Belg.*, Brussels **26** 1950 no. 12, 32 pp. [Col.]
- 397.—Breuning, S. Einige neue Arten und Rassen der Gattungen *Carabus* und *Cyprinus* aus Ostasien. *Ent. Arb.*, München **1** 1950 pp. 198–202, 7 figs. [Col.]
- 398.—Breuning, S. Beitrag zur Carabafauna Ostasiens. *Ent. Arb.*, München **1** 1950 pp. 202–204. [Col.]
- 399.—Breuning, S. Descriptions de nouveaux Lamiaires de l'Inde (Coleoptera: Lamiidae). *Indian For. Rec.*, Delhi (N.S.) *Ent.* **7** (1949) 1950 pp. 255–265.
- 400.—Breuning, S. Considérations préliminaires sur la classification des Lamiaires. *Longicornia*, Paris **1** 1950 pp. 25–28, 1 fig.
- 401.—Breuning, S. Revision des "Parmenini" (pp. 29–159, 18 figs.), "Morimopsini" (pp. 161–262, 19 figs.), "Ocularini" (pp. 263–270, 2 figs.), "Xenoleini" (pp. 271–278, 1 fig.), "Theocridini" (pp. 279–303, 6 figs.), "Stenobiini" (pp. 305–315, 3 figs.), "Homoneoeini" (pp. 317–377, 8 figs.), "Xylorhizini" (pp. 379–410, 8 figs.), "Proctocerini" (pp. 411–414, 1 fig.), "Cloniocerini" (pp. 415–421, 1 fig.). *Longicornia*, Paris **1** 1950. [Col.]
- 402.—Breuning, S. Lamiaires nouveaux de la collection Lepesme. *Longicornia*, Paris **1** 1950 pp. 511–535, 8 figs.
- 403.—Breuning, S. Liste des publications scientifiques sur les Longicornes. *Longicornia*, Paris **1** 1950 pp. 591–594.
- Breuning, S. see Lepesme & Breuning.
- 404.—Brian, M. V. The stable winter population structure in species of *Myrmica*. *J. Anim. Ecol.*, London **19** 1950 pp. 119–123. [Hym.]
- 405.—Briceño-Iragorry, L. Breve nota sobre *Culicoides* Bol. Lab. Clin. "Luis Razetti", Caracas **15** 1949 pp. 318–319. [Dipt.]
- 406.—Brieger, F. G. & Kerr, W. E. Sobre o comportamento mitótico e meiótico de cromossomas policênicos ou com ponto de inserção difuso. *An. Esc. sup. Agric. "Luiz de Queiroz"*, São Paulo **6** 1949 pp. 180–192, 44 figs.
- 407.—Brinck, P. The beetle fauna of Tristan da Cunha. *Proc. 8th int. Congr. Ent.* Stockholm 1948, 1950 pp. 361–364. [Col.]

408.—**Brinck, P.** Discussion on entomological nomenclature. Introduction. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 985–988.

409.—**Briones M., H.** Tumores y alimentación. I. Efectos de las variaciones en la dieta de levadura sobre tumores melánicos de la *Drosophila melanogaster*. Biológica, Santiago de Chile fasc. VIII–XI (1948–1949) 1950 pp. 55–67, 3 figs. [Dipt.]

Brito da Cunha, A. see Burla, Brito da Cunha, Cavalcanti, Dobzhansky & Pavan; Burla, Brito da Cunha, Cordeiro, Dobzhansky, Malogolowkin & Pavan; Dobzhansky, Burla & Brito da Cunha.

410.—**Brncić, J. D.** Un nuevo tumor hereditario de la *Drosophila melanogaster* tu^{49h}. Biológica, Santiago de Chile fasc. VIII–XI (1948–1949) 1950 pp. 69–83, 6 figs. [Dipt.]

411.—**Broadbent, L.** Factors affecting Aphid flight. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 619–621. [Hem.]

412.—**Broadhead, E.** A revision of the genus *Liposcelis* Motschulsky with notes on the position of this genus in the order Corrodentia and on the variability of ten *Liposcelis* species. Trans. R. ent. Soc. London **101** 1950 pp. 335–388, 3 pls., 28 figs. [Psocopt.]

413.—**Bromley, S. W.** Florida Asilidae (Diptera) with description of one new species. Ann. ent. Soc. Amer., Columbus **43** 1950 pp. 227–239, 1 pl.

414.—**Bromley, S. W.** Records and descriptions of Asilidae in the collection of the University of Michigan museum of Zoology (Diptera). Occ. Pap. Mus. Zool. Univ. Michigan, Ann Arbor no. 527 1950 5 pp.

415.—**Bromley, S. W.** Ohio robber flies V (Diptera: Asilidae). Ohio J. Sci., Columbus **50** 1950 pp. 229–234.

416.—**Brookman, B. & Reeves, W. C.** A new name for a California mosquito (Diptera, Culicidae). Pan-Pacific. Ent., San Francisco **26** 1950 pp. 159–160.

417.—**Brooks, C. J.** A revision of the genus *Tenaris* Hübner (Lepidoptera: Amathusiidae). Trans. R. ent. Soc. London **101** 1950 pp. 179–238, 8 pls. 1 fig.

418.—**Bros, E. de.** *Caradrina wulschlegeli* Pgtr. in der Schweiz. Ein neuer Fundort bei Montana. Z. wien. ent. Ges., Vienna **35** 1950 pp. 106–109. [Lep.]

419.—**Brown, E. S.** A small collection of Hemiptera, mostly aquatic, from Oman. Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 474–480, 2 figs.

420.—**Brown, E. S.** A new British locality for *Tipula serrulata* Lack-schewitz (Dipt., Tipulidae), with a re-description of the male genitalia. Ent. mon. Mag., London **86** 1950 pp. 50–52, 11 figs.

421.—**Brown, E. S.** Notes on the taxonomy, British distribution and ecology of *Tetrix subulata* (L.) and *T. ceperoi* I. Bolivar (Orthopt., Tetrigidae). J. Soc. Brit. Ent., Bournemouth **3** 1950 pp. 189–200, 3 figs.

422.—**Brown, F. M.** The American Papilioids. Lep. News, New Haven **4** 1950 pp. 39–41.

423.—**Brown, F. M.** Measurements and Lepidoptera. Lep. News, New Haven **4** 1950 pp. 51–52, 76.

Brown, F. M. see Comstock & Brown.

Brown, R. Z. see Schneirla & Brown.

424.—**Brown, W. J.** The rôle of morphology in systematics. Canad. Ent., Guelph **81** (1949) 1950 pp. 299–303.

425.—**Brown, W. J.** The extra-limital distribution of some species of Coleoptera. Canad. Ent., Guelph **82** 1950 pp. 197–205.

Brown, W. J. see Barter & Brown.

426.—**Brown, jr., W. L.** Supplementary notes on the feeding of Dacetine ants. Bull. Brooklyn ent. Soc., Lancaster, Pa. **45** 1950 pp. 87–89. [Hym.]

427.—Brown, jr., W. L. The status of two common North American carpenter ants. Ent. News, Lancaster, Pa. **61** 1950 pp. 157–161. [Hym.]

428.—Brown, jr. W. L. Revision of the ant tribe Dacetini: II, V. Trans. Amer. ent. Soc., Philadelphia **76** 1950 pp. 27–36, 2 figs., 143–145. [Hym.]

429.—Brown, jr., W. L. Preliminary descriptions of seven new species of the Dacetine ant genus *Smithistruma* Brown. Trans. Amer. ent. Soc., Philadelphia **76** 1950 pp. 37–45, 1 pl. [Hym.]

430.—Brown, jr., W. L. Morphological, taxonomic and other notes on ants. Wasmann J. Biol., San Francisco **8** 1950 pp. 241–250. [Hym.]

431.—Brown, jr., W. L & Nutting, W. L. Wing venation and the phylogeny of the Formicidae (Hymenoptera). Trans. Amer. ent. Soc., Philadelphia **75** 1950 pp. 113–132, 2 pls.

432.—Browne, F. G. New Scolytidae and Platypodidae (Coleoptera) from Malaya. Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 641–650, 3 figs.

433.—Brues, C. T. The salagubong gong, a Filipino insect toy. Psyche, Cambridge, Mass. **57** 1950 pp. 26–28, 1 fig.

434.—Brues, C. T. Large raptorial birds as enemies of Cicadas. Psyche, Cambridge, Mass. **57** 1950 pp. 74–75. [Hem.]

435.—Brues, C. T. Vespid wasps (*Eumenes curvata*) attracted to smoke. Psyche, Cambridge, Mass. **57** 1950 pp. 114–115, 1 fig.

Brues, C. T. see Fairchild & Brues.

436.—Bruet, E. Le loess de la République de l'Equateur et ses nids fossiles d'insectes. Rev. franç. Ent., Paris **17** 1950 pp. 280–283.

Brunel, D. see Harant & Brunel.

Brunelle, L. see Bellemare & Brunelle.

437.—Bruun, H. & Schantz, M. v. Till kändedomen om *Brenthis improba* Btl. ssp. *improbula* Bryk

(Lepid.). [In Finnish with English summary.] Notul. ent., Helsinki **29** (1949) 1950 pp. 83–89, 1 pl. 4 figs.

438.—Bryant, G. E. New species of Halticinae (Coleoptera) from Kilimanjaro and Ruwenzori, collected by Dr. G. Salt. Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 163–166, 2 figs.

439.—Bryant, G. E. New species of Chrysomelidae (Coleoptera) from New Guinea, collected by Miss L. E. Cheesman (contd.). Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 209–219, 358–363, 744–750, 19 figs.

440.—Bryant, G. E. A new species of *Longitarsus* (Halticinae, Coleoptera) damaging peppermint in Southern Rhodesia. Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 628–629.

441.—Bryant, G. E. Contribution à l'étude de l'Air. Coléoptères Chrysomelidae, liste des espèces. Mém. Inst. franç. Afr. noire, Paris no. 10 1950 p. 203.

442.—Bryant, G. E. Megalopodinae (Coleoptera Phytophaga) Fam. Chrysomelidae. Explor. Parc nat. Albert, Miss. de Witte (1933–1935), Brussels 1950 fasc. 70 pp. 15–16.

443.—Brygoo, E. R. R. Tabanidés d'Ayos région du Nyong et Sanaga, subdivision d'Akonolinga. Études cameroun. [Douala] **3** 1950 no. 29–30 pp. 119–131. [Dipt.]

444.—Bryk, F. Entomological results from the Swedish Expedition 1934 to Burma and British India. Lepidoptera : Fam. Notodontidae Stephens, Coccidae Newman and Hepialidae Stephens. Gesammelt von René Malaise. Ark. Zool., Stockholm **42A** 1950 no. 19 pp. 1–51, 4 pls. 1 map.

445.—Bryk, F. Eine kleine Ausbeute von nordindischen Spinnen. Ent. Tidskr., Stockholm **71** 1950 pp. 55–59. [Lep.]

446.—Bryk, F. Warum muss der Linnésche Name für die schwedische *Cydippe* fallen ? Ent. Tidskr., Stockholm **71** 1950 pp. 60–62. [Lep.]

447.—**Bryk, F.** Parallelie Zugrichtung bei Schmetterlingen und Vögeln im Stockholmer Scherenhofe. Ent. Tidskr., Stockholm **71** 1950 pp. 177-178. [Lep.]

448.—**Bryk, F.** Geographische und individuelle Variabilität der Sphragisbildung (Lepidoptera: Parnassiidae). Ent. Tidskr., Stockholm **71** 1950 pp. 230-234, 6 figs.

449.—**Bryk, F.** Eine neue schwedische Unterart von *Melitaea cinxia* (L.) (Lep.). Opusc. ent., Lund **15** 1950 pp. 209-210.

450.—**Bryk, F.** Ueber die Plethopterygie bei den Schmetterlingen. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 541-543. [Lep.]

451.—**Bryk, F.** Der Gattungsgriff bei Linné. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 989-992.

452.—**Bryk, F.** Ueber einen aberativen Schmetterling mit einem für eine andersartige Unterfamilie typischen Merkmal (Acraeinae). Z. Lepid., Krefeld **1** 1950 pp. 41-44, 1 fig.

453.—**Buchholz, K. F.** Zwei neue *Orthemis*-Arten (Odonata, Libellulinae). Bonn. zool. Beitr. **1** 1950 pp. 79-82, 2 figs.

454.—**Buchli, H.** La parthénogénèse, les rapports entre sexués et leur influence sur la ponte chez *Reticulitermes lucifugus* Rossi (Rhino-termitidae). C.R. Acad. Sci., Paris **230** 1950 pp. 1697-1699. [Isopt.]

455.—**Buchli, H.** Recherche sur la fondation et le développement des nouvelles colonies chez le terme lucifuge (*Reticulitermes lucifugus* Rossi). Physiol. comp. oecol., The Hague **2** 1950 pp. 145-160, 3 pls. 3 figs. [Isopt.]

Buchli, H. see Grassé, Noirot, Clément & Buchli.

456.—**Buck, F. D.** *Grynobius excavatus* Kugelann and *G. kiesenwetteri* Edwards (Col., Anobiidae) one species. Ent. mon. Mag., London **87** 1950 pp. 127-128, 1 fig.

457.—**Buckell, E. R.** Records of bees from British Columbia: Megachilidae. Proc. ent. Soc. B.C., Kamloops, B.C. **46** 1950 pp. 21-31, 1 map. [Hym.]

458.—**Buckell, E. R. & Spencer, G. J.** The social wasps (Vespidae) of British Columbia. Proc. ent. Soc. B.C., Kamloops, B.C. **46** 1950 pp. 33-40, 1 map.

Buen see De Buen.

459.—**Burdette, W. J.** Lethal mutation rate in *Drosophila* treated with 20-methylcholanthrene. Science, Lancaster, Pa. **112** 1950 pp. 303-306. [Dipt.]

460.—**Buren, W. F.** A new *Lasius* (*Acanthomyops*) with a key to North American females (Hymenoptera, Formicidae). Proc. ent. Soc. Washington **52** 1950 pp. 184-190.

461.—**Burgess, E. D.** Development of gypsy moth sex-attractant traps. J. econ. Ent., Menasha **43** 1950 pp. 325-328, 4 figs. [Lep.]

462.—**Burgess, L. E.** A preliminary quantitative study of pterine pigment in the developing egg of the grasshopper, *Melanoplus differentialis*. Arch. Biochem., New York **20** 1949 pp. 347-355, 1 fig. [Orth.]

463.—**Burla, H.** Inversionen in Wildpopulationen von Arten der annulimana-Gruppe der Gattung *Drosophila*. Rev. suisse Zool., Geneva **57** 1950 pp. 488-495, 4 figs. [Dipt.]

464.—**Burla, H., Brito da Cunha, A., Cavalcanti, A. G. L., Dobzhansky, T. & Pavan, C.** Population density and dispersal rates in Brazilian *Drosophila willistoni*. Ecology, Durham, N.C. **31** 1950 pp. 393-404. [Dipt.]

465.—**Burla, H., Brito da Cunha, A., Cordeiro, A. R., Dobzhansky, T., Malogolowkin, C. & Pavan, C.** The willistoni group of sibling species of *Drosophila*. Evolution, Lancaster, Pa. **3** (1949) 1950 pp. 300-314, 5 figs. [Dipt.]

Burla, H. see Cunha, Burla & Dobzhansky; Dobzhansky, Burla & Brito da Cunha; Pavan, Dobzhansky & Burla.

466.—**Burlini, M.** Una nuova specie di *Cryptocephalus* italiano (Coleoptera: Chrysomelidae). Boll. Soc. ent. ital., Genoa **80** 1950 pp. 54-57, 3 figs.

467.—Burmann, K. Ein Versuch zur schematischen Darstellung der Höhenverbreitung der Nordtiroler Larentien (Lepidoptera, Geometridae). Ent. Nachr. Bl. öst. schweiz. Ent., Vienna 2 1950 pp. 85–86.

468.—Burmann, K. Wo hat *Isturgia carbonaria* Cl. ihre Nord- und Ostgrenzen der alpinen Verbreitung? (Macrolepidoptera, Geometridae.) Mitt. münchen. ent. Ges., Munich 40 1950 pp. 175–180, 1 map.

469.—Burmann, K. Die Eiablage *Eriogaster arbusculae* Frr. Wien. ent. Rdsch., Vienna 1 1949 no. 3 pp. 4–5. [Lep.]

470.—Burmann, K. Das Verhalten von *Endromis versicolora* L. bei Schnee. Wien. ent. Rdsch., Vienna 2 1950 pp. 20–22. [Lep.]

471.—Burmann, K. *Nothris obscuripennis* Frey in Nordtirol (Lep., Gelechiidae). Z. Lepid., Krefeld 1 1950 pp. 31–34.

472.—Burmann, K. *Gracilaria populetorum* Z. (Lepidoptera, Gracillariidae). Z. wien. ent. Ges., Vienna 3 1950 pp. 19–20.

473.—Burnett, T. Modal temperatures for the greenhouse whitefly *Trialeurodes vaporariorum* and its parasite *Encarsia formosa*. Ecology, Durham, N.C. 29 1948 pp. 181–189, 4 figs. [Hem., Hym.]

474.—Burrau, N. Neue oder für Schweden neue Schmetterlingsformen (Lep.). Opusc. ent., Lund 15 1950 pp. 81–86, 1 pl.

Bursell, E. see Ewer & Bursell.

475.—Burton, J. F. Observations on a migration of insects over the Thames Estuary. Entomologist, London 83 1950 pp. 203–206.

476.—Busnel, R. G. Nouvelles acquisitions sur les ptérines des insectes. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 622–625.

477.—Busnel, R. G., Levy, G. & Polonovski, M. Sur l'identité du pigment ptérinique à fluorescence bleue du *Bombyx mori* et de sa fluorescyanine. C.R. Soc. Biol., Paris 144 1950 pp. 334–335. [Lep.]

Busnel, R. G. see Drilhon & Busnel Polonovski & Busnel.

478.—Buterandt, A., Karlson, P. & Hannes, G. Ueber den "Anti-Bar-Stoff", einen genabhängigen, morphogenetischen Wirkstoff bei *Drosophila melanogaster*. Biol. Zbl., Leipzig 65 1946 pp. 41–51, 3 figs. [Dipt.]

479.—Butler, C. G. A new design of microsyringe tip for the instrumental insemination of queen honeybees. Nature, London 166 1950 pp. 957–958. [Hym.]

480.—Cachan, P. Les termites de Madagascar. Nat. Malgache, Tananarive 2 1950 pp. 111–117, 2 pls. 20 figs. [Isopt.]

Cailar, J. du see Tuzet, Bonnet & Cailar.

481.—Caldwell, J. S. Three new Antillean Fulgoroidea, with distributional notes on a few others (Homoptera). Amer. Mus. Novit., New York no. 1460 1950 4 pp. 6 figs.

482.—Caldwell, J. S. The synonymy of *Empoasca fabalis* DeLong (Cicadellidae: Homoptera). J. Agric. Univ. P.R., Rio Piedras 31 (1947) 1950 p. 226.

483.—Caldwell, J. S. New genera and species of Cixiidae from Mexico (Homoptera, Fulgoroidea). Proc. ent. Soc. Washington 52 1950 pp. 287–290, 1 pl. [Hem.]

484.—Callan, E. Observations on tropical wasps in Trinidad. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 204–206. [Hym.]

Callan, E. McC. see Lamont & Callan.

485.—Cameron, E. The biology and economic importance of *Alomya debellator* (F.), a remarkable parasite of the Swift Moth, *Hepialus lupulinus* (L.). Bull. ent. Res., London 41 1950 pp. 429–438, 5 figs. [Hym., Lep.]

486.—Cameron, E. On the identity of an Ichneumonid parasite of *Hepialus lupulinus* (L.). Bull. ent. Res., London 41 1951 p. 637. [Hym., Lep.]

487.—Cameron, M. New species of Staphylinidae (Col.) from the Malay Peninsula. Ann. Mag. nat. Hist., London (12) 3 1950 pp. 1–40, 89–131.

488.—Cameron, M. New species of New Zealand Staphylinidae (Col.). Ent. mon. Mag., London **86** 1950 pp. 23–26.

489.—Cameron, M. Staphylinidae (Coleoptera Polyphaga). Explor. Parc nat. Albert, Miss. de Witte (1933–1935), Brussels fasc. 59 1950 85 pp.

490.—Cameron, M. Contribution à l'étude de l'Air. Coléoptères Staphylinidae. Mém. Inst. franç. Afr. noire, Paris no. 10 1950 pp. 212–215, 1 fig.

491.—Cameron, M. New Staphylinidae from the Ivory Coast (Coleoptera). Mém. Mus. Hist. nat., Paris (N.S.) **20** 1948 pp. 223–246.

492.—Cameron, M. New species of Staphylinidae (Col.) from Angola. Publ. cult. Mus. Dundo, Comp. Diam. Angola, Lisbon no. 7 1950 pp. 111–121.

493.—Cameron, M. Three new species of Staphylinidae (Coleopt.) from Cameroon and Portuguese Guinea. Rev. suisse Zool., Geneva **57** 1950 pp. 429–431.

494.—Cameron, M. New Staphylinidae from the Belgian Congo. Rev. Zool. Bot. afr., Brussels **43** 1950 pp. 92–98. [Col.]

Capdevielle, A. *see* Anduze & Capdevielle.

495.—Cañizo, J. del & Moreno, V. Biología y ecología de la langosta mediterránea (*Dociostaurus maroccanus* Thunb.). Bol. Pat. veg. Ent. agríc., Madrid **17** (1949) 1950 pp. 209–242, 6 figs.

496.—Capener, A. L. A new genus and species of Membracid from South Africa. J. ent. Soc. sthn Africa, Pretoria **13** 1950 pp. 99–102, 9 figs. [Hem.]

Caporiacco, L. di *see* Bianchi, Caporiacco, Massera & Valle.

497.—Capps, H. W. A new species of *Stenocharis* Grossbeck and transfer of three related species to the genus (Lepidoptera: Geometridae). Bull. S. Calif. Acad. Sci., Los Angeles **49** 1950 pp. 12–14, 1 pl.

Capriles *see* Maldonado Capriles.

498.—Carayon, J. *Helopeltis* (Hem. Miridae) nouveaux nuisibles aux Quinquinas en Afrique française. Bull. Mus. Hist. nat., Paris (2) **21** (1949) 1950 pp. 558–565, 2 figs.

499.—Carayon, J. Observations sur la biologie des Hémiptères microphysidés. Bull. Mus. Hist. nat., Paris (2) **21** (1949) 1950 pp. 710–716, 2 figs.

500.—Carayon, J. Caractères anatomiques et position systématique des Hémiptères Nabidae (note préliminaire). Bull. Mus. Hist. nat., Paris (2) **22** 1950 pp. 95–101, 3 figs.

501.—Carayon, J. Nombres et disposition des ovarioles dans les ovaires des Hémiptères-Hétérophtères. Bull. Mus. Hist. nat., Paris (2) **22** 1950 pp. 470–475.

502.—Carayon, J. Une localité des environs d'Albi (Tarn) riche en Hémiptères rares ou peu connus. Feuille Nat., Paris (N.S.) **5** 1950 pp. 61–65, 1 fig.

503.—Carayon, J. Contribution à l'étude de l'Air. Hémiptères Nabidae. Mém. Inst. franç. Afr. noire, Paris no. 10 1950 p. 321.

504.—Carayon, J. Les fossettes tégumentaires abdominales des Nabidés (Hemipt. Heter.). Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 207–213, 5 figs.

505.—Carayon, J. & Gómez-Menor, J. *Phorticus minutulus* Reut., en España y distribución geográfica de la subfamilia Prostemminae (Hemipt., Reduviidae). Bol. Soc. esp. Hist. nat., Madrid **48** Biol. 1950 pp. 15–20, 2 figs.

Carlo *see* De Carlo.

506.—Carlson, J. G. & Hollaender, A. Mitotic effects of ultraviolet radiation of the 2250 Å region, with special reference to the spindle and cleavage. J. cell. comp. Physiol., Philadelphia **31** 1948 pp. 149–173, 10 figs. [Orth.]

507.—Carmin, J. Plants in Israel, their biology, diseases and cryptogamic inhabitants. 3. *Alhagi maurorum* Medik. Bull. indep. biol. Lab. Israel, Kefar Malal **6** 1950 no. 2 [7 pp.] 37 figs.

- 508.—Carne, P. B. The morphology of the immature stages of *Aphodius howitti* Hope (Coleoptera, Scarabaeidae, Aphodiinae). Proc. Linn. Soc. N.S.W., Sydney **75** 1950 pp. 158–166, 1 pl. 13 figs.
- 509.—Carneiro-Mendes, F. Lepidópteros (macro) da região de Sintra (Subsídio para a carta de distribuição dos Lepidópteros de Portugal). Bull. Soc. portug. Ciênc. nat., Lisbon **18** 1950 pp. 47–65.
- 510.—Carneiro Ribeiro, J. H. Monagem em lâminas de material entomológico. Agronomia, Rio de Janeiro **9** 1950 pp. 161–163.
- 511.—Carpenter, F. M. The lower Permian insects of Kansas. Part 10. The order Protorthropoidea : the family Liomopteridae and its relatives. Proc. Amer. Acad. Arts Sci., Boston **78** 1950 pp. 185–219, 3 pls. 11 figs.
- 512.—Carpenter, G. D. H. Homochromie et moyens de défense chez les insectes. C.R. 13e Congr. int. Zool. Paris 1948, 1949 pp. 466–467.
- 513.—Carpenter, G. D. H. & Jackson, T. H. E. New butterflies from East Africa and the Ituri Forest. Proc. R. ent. Soc. London (B) **19** 1950 pp. 97–108, 1 col. pl. [Lep.]
- 514.—Carpentier, F. & M. Observations sur la morphologie des Méganeurides (Insectes, Protodonates), du Stéphanien de Commentry, France. C.R. 13e Congr. int. Zool. Paris 1948, 1949 pp. 553–554.
- 515.—Carrera, M. Uma nova espécie de *Glaphyropyga* da zona do Canal no Panamá (Diptera, Asilidae). Dusenia, Curitiba **1** 1950 pp. 27–32, 1 fig.
- 516.—Carrera, M. Asilideos da Argentina (Diptera). I—Sobre o gênero *Prolepsis* Walker, 1851. Dusenia, Curitiba **1** 1950 pp. 83–90, 4 figs.
- 517.—Carrera, M. Sobre o gênero *Plagiocephalus* Wiedemann, 1830 (Diptera, Otitidae, Pterocallinae). Papéis avulsos Dep. Zool. São Paulo **9** 1950 pp. 259–268, 4 figs.
- 518.—Carrera, M. Synoptical keys for the genera of Brazilian Asilidae (Diptera). Rev. bras. Biol., Rio de Janeiro **10** 1950 pp. 99–111.
- 519.—Carrera, M. & d'Andretta, M. A. V. Asilideos do México (Diptera). Papéis avulsos Dep. Zool., São Paulo **9** 1950 pp. 159–191, 61 figs.
- 520.—Carrera, M. & d'Andretta, M. A. V. Sobre as espécies brasileiras de *Systropus* Wiedemann, 1830 (Diptera, Bombyliidae). Papéis avulsos Dep. Zool., São Paulo **9** 1950 pp. 295–319, 48 figs.
- Carrick, R. see Johnson & Carrick.
- 521.—Carriker, Jr., M. A. Studies in Neotropical Mallophaga (X). Amblycera of the New World "Galliformes". Part 2. The genus *Amyrsidea* Ewing. Rev. Acad. colombiana, Bogota **7** 1950 pp. 492–510, 70 figs.
- 522.—Carriker, Jr., M. A. Studies in Neotropical Mallophaga. VI, VIII. Rev. bras. Biol., Rio de Janeiro **10** 1950 pp. 1–21, 46 figs., 163–188, 46 figs.
- 523.—Carson, H. L. & Stalker, H. D. Seasonal variation in gene arrangement frequencies over a three-year period in *Drosophila robusta* Sturtevant. Evolution, Lancaster, Pa. **3** (1949) 1950 pp. 322–329. [Dipt.]
- 524.—Carson, H. L. & Stalker, H. D. Seasonal variation in the morphology of *Drosophila robusta* Sturtevant. Evolution, Lancaster, Pa. **3** (1949) 1950 pp. 330–343, 3 figs. [Dipt.]
- 525.—Carter, H. F. The genus *Taeniorhynchus* Lynch Arribalzaga (Diptera, Culicidae) with special reference to the bionomics and relation to disease of the species occurring in Ceylon. Ceylon J. Sci., Colombo (B Zool.) **24** 1950 pp. 1–26, 2 pls. 9 figs.
- 526.—Carter, H. F. Ceylon mosquitoes : Lists of species and names of mosquitoes recorded from Ceylon. Ceylon J. Sci., Colombo (B Zool.) **24** 1950 pp. 85–115. [Dipt.]
- 527.—Carter, M. W. The *Pittosporum* Chermid, *Powelliella vitreoradiata* Mask. N.Z.J. Sci., Wellington (B) **31** (1949) 1950 no. 2 pp. 31–42, 5 figs. [Hem.]

528.—Carter, M. W. The family Peloridiidae (Hemiptera) and its occurrence in New Zealand. Trans. Proc. roy. Soc. N.Z., Wellington **78** 1950 pp. 167–170, 3 figs.

529.—Cartwright, O. L. Further corrections and additions to the Clemson, South Carolina, list of Scarabaeidae (Coleoptera). Ent. News, Lancaster, Pa. **61** 1950 p. 72.

530.—Carvalhaes, J. O problema da cor nos insectos. Brotéria, Lisbon Ci. nat. **19** 1950 pp. 116–136.

531.—Carvalhaes, J. Significado ecológico do mimetismo nos insectos. Brotéria, Lisbon Ci. nat. **19** 1950 pp. 145–161.

Carvalho, E. *see* Luna de Carvalho.

534.—Carvalho, J. C. M. Mirídeos neotropicais, XXXVIII: descrição de três espécies novas (Hemiptera). An. Acad. bras. Cienc., Rio de Janeiro **22** 1950 pp. 19–24, 14 figs.

535.—Caspari, E. On the selective value of the alleles Rt and rt in *Ephesia kühniella*. Amer. Nat., Lancaster, Pa. **84** 1950 no. 818 pp. 367–380, 3 figs. [Lep.]

536.—Causey, O. R., Deane, L. M. & Deane, M. P. Descrição de um novo anofelino da parte alta do Vale do Amazonas, *Anopheles (Nyssorhynchus) galvãoi* n. sp. Rev. Serv. Saúde públ., Rio de Janeiro **3** 1950 pp. 491–495, 5 figs. [Translation of paper in Rev. paul. Med. **23** 1943 pp. 293–296, not seen.] [Dipt.]

Causey, O. R. *see* Damasceno, Arouck & Causey.

Cavalcanti, A. G. L. *see* Burla, Brito da Cunha, Cavalcanti, Dobzhansky & Pavan.

537.—Cavro, E. Catalogue des Hyménoptères du département du nord et régions limitrophes. I. Aculéates. Bull. Soc. ent. Nord France Suppl. no. 52, Paris, Lechevalier 1950 **84** [+2] pp.

538.—Cazal, P. Anatomie comparée des glandes retrocérébrales et du sympathique céphalique des insectes—son utilité pour la systématique. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 116–123, 14 figs.

539.—Cazal, P. Conception histophysiolgue des glandes retrocérébrales des insectes. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 214–217, 8 figs.

540.—Ceballos, G. Citas nuevas de himenópteros. Graellsia, Madrid **7** 1949 pp. 99–103.

541.—Cerqueira, N. L. Description of the larva, pupa and female of *Aedes (Finlaya) argyrothorax* Bonne-Wepster and Bonne. Proc. ent. Soc. Washington **52** 1950 pp. 173–178, 2 pls. [Dipt.]

542.—Cerruti, M. Allevamenti sperimentali di Coleotteri. Hist. Nat., Rome **1** 1946 pp. 58–62.

543.—Cerruti, M. Nuova specie di *Platyprosopus* (s. str.) Mannerh., dell'Africa Orientale (Coleopt.-Staphyl.). Diagnosi preventiva *Platyprosopus ghidinii* n. sp. Hist. nat., Rome **2** 1950 pp. 49–50.

Chadwick, L. E. *see* Dethier & Chadwick.

544.—Chamberlain, R. W. & Sikes, R. K. A safe method of handling mosquitoes for virus transmission experiments. J. Parasit., Lancaster, Pa. **36** 1950 pp. 499–500. [Dipt.]

545.—Chambers, V. H. *Croesus brischkei* Zaddach, a sawfly (Hym., Tenthredinidae) new to Great Britain. Ent. mon. Mag., London **86** 1950 pp. 85–86.

546.—Chambers, V. H. The larvae of the broom sawflies *Rhogogaster picta* Klug and *R. genistae* Benson (Hym., Tenthredinidae). Ent. mon. Mag., London **86** 1950 pp. 117–120, 4 figs.

Charconnet-Harding, F. *see* Valadares & Charconnet-Harding.

Chassaignet, R. *see* Abonnenc & Chassaignet; Floch & Chassaignet.

Chatterjee, N. C. *see* Pant & Chatterjee.

Chatterjee, S. N. *see* Mukerji & Chatterjee.

547.—Chaudhuri, S. P. R. & Gupta, J. D. Cytological studies on the Indian dragonflies. I. Structure and behaviour of the chromosomes in six species of dragonflies (Odonata).

Proc. zool. Soc. Bengal, Calcutta **2**
1949 pp. 81-93, 6 figs.

548.—Chaudhuri, S. P. R. & Manna, G. K. On the frequency of association between non-homologous chromosomes in the grasshopper *Jesonia punctifrons*. J. exp. Zool., Philadelphia **114** 1950 pp. 421-434, 5 figs. [Orth.]

549.—Chauvin, R. Sur la prise des échantillons en écologie entomologique. Ann. Sci. nat., Paris (11) **11** 1949 pp. 351-352.

550.—Chauvin, R. Le transport des proies chez les fourmis. Y-a-t-il entraide? Behaviour, Leiden **2** 1950 pp. 249-256. [Hym.]

551.—Chen, Chin-wen. Systematic notes on the genera *Orolestes* and *Psolodesmus* (Odonata). Quart. J. Taiwan Mus. **3** 1950 pp. 23-32, 5 figs.

551A.—Chen, Chin-wen. A revision of the genus *Chlorogomphus* Selys of eastern China (Odonata: Cordulegastridae). Quart. J. Taiwan Mus. **3** 1950 pp. 137-150, 23 figs.

Chen, P. S. see Gloor & Chen.

552.—Cheng, Fung Ying. New species of Mecoptera from Northwest China. Psyche, Cambridge, Mass. **56** (1949) 1950 pp. 139-173, 7 pls.

553.—Chermock, R. L. A generic revision of the Limenitini of the World. Amer. Midl. Nat., Notre Dame **43** 1950 pp. 513-569, 68 figs. [Lep.]

554.—Chermock, R. L. Subspeciation in *Neophasia menapia* Behr (Lepidoptera, Pieridae). Proc. ent. Soc. Washington **52** 1950 pp. 44-45.

555.—[Chetuirkina, I. A.] Certain data on the fauna of Acrididae (Orthoptera, Acridoidea) of the Transcarpathian Ukraine. [In Russian.] C.R. Acad. Sci. URSS, Moscow (N.S.) **70** 1950 pp. 729-732.

556.—Chiang, H. C. & Hodson, A. C. An analytical study of population growth in *Drosophila melanogaster*. Ecol. Monogr., Durham, N.C. **20** 1950 pp. 173-206, 32 figs. [Dipt.]

557.—Chiang, H. C. & Hodson, A. C. The relation of copulation to fecundity and population growth in

Drosophila melanogaster. Ecology, Durham, N.C. **31** 1950 pp. 255-259, 3 figs. [Dipt.]

Ch'iang, I-hung see Hoepli & Ch'iang.

558.—Chiarelli de Gahan, A. & Touron, E. A. Datos biológicos de *Proxenus rionegrensis*. Rev. Invest. agric., Buenos Aires **4** 1950 pp. 139-151, 3 figs. [Lep.]

559.—Chin, Chun-teh. Studies on the physiological relations between the larvae of *Leptinotarsa decemlineata* Say and some Solanaceous plants. Tijdschr. PIZiekt., Wageningen **56** 1950 pp. 1-88, 32 figs. [Col.]

Chin, Chun-teh see Wilde & Chin.

Chin, Yin-ch'ang see T'ang & Chin.

560.—China, W. E. A check list of the British Hemiptera-Homoptera Auchenorrhyncha. Ent. mon. Mag., London **86** 1950 pp. 243-251.

561.—China, W. E. & Usinger, R. L. A new genus of Tribelocephalinae from Fernando Poo (Hemiptera Reduviidae). Ann. Mus. Stor. nat., Genova **64** 1949 pp. 43-47, 2 figs.

562.—China, W. E. & Usinger, R. L. *Hermatobates haddonii* Carpenter from the Marquesas Islands (Hemiptera: Gerridae). Proc. Hawaii ent. Soc., Honolulu **14** (1949) 1950 p. 53.

563.—China, W. E., Usinger, R. L. & Villiers, A. On the identity of *Heterocleptes* Villiers 1948 and *Hydrobatodes* China and Usinger 1949 (Hemiptera-Heteroptera Families Reduviidae and Hydrometridae). Rev. Zool. Bot. afr., Brussels **43** 1950 pp. 336-344, 3 figs.

Chino, M. see Komai, Chino & Hosino.

564.—Chneour, A. Contribution à l'étude de Macrolépidoptères de Tunisie. Description d'une Noctuïde rare *Agrotis imperator* Bang-Haas (Lépidoptère). Bull. Soc. Hist. nat. Afr. N., Algiers **40** (1949) 1950 pp. 196-197, 1 fig.

565.—Chopard, L. Two new species of Gryllacridoidea from southern Africa. Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 446-451. [Orth.]

566.—**Chopard, L.** Note sur les Dolichopodes de Corse (Orth. Rhaphidophoridae). Bull. Soc. ent. France, Paris **55** 1950 pp. 12–15, 5 figs.

567.—**Chopard, L.** Tridactylidae (Orthoptera Tettigonioidea). Explor. Parc nat. Albert, Miss. de Witte (1933–1935), Brussels 1950 fasc. 70 p. 3.

568.—**Chopard, L.** Contribution à l'étude de l'Air. Orthoptéroides. Mém. Inst. franç. Afr. noire, Paris no. 10 1950 pp. 127–145, 2 figs.

569.—**Chopard, L.** La signification biologique des colorations animales. Nature, Paris 1950 no. 3184 pp. 225–230, 6 figs.

570.—**Chopard, L.** Sur l'anatomie et le développement d'une blatte vivipare. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 218–222, 6 figs. [Orth.]

571.—**Chopard, L.** Orthoptéroïdes cavernicoles du Congo belge. Rev. Zool. Bot. afr., Brussels **43** 1950 pp. 244–250, 3 figs.

572.—**Chou, I.** Studio sur genero *Aulacaspis* (Coccidae, Homoptera) en Cinio. [In Chinese with Esperanto summary.] Ent. sinica, Shensi **3** (1948–1949) 1949 14 pp. 7 figs.

573.—**Chou, I.** Listo de la konataj Aleurodoj Homopteroj en Cinio. [In Chinese with Esperanto summary.] Ent. sinica, Shensi **3** (1948–1949) 1949 17 pp.

574.—**Chow, C. Y.** Observations on mosquitoes breeding in plant containers in Yunnan. Ann. ent. Soc. Amer., Columbus **42** (1949) 1950 pp. 465–470. [Dipt.]

575.—**Chow, C. Y.** Collection of Culicine mosquitoes (Diptera, Culicidae) in Taiwan (Formosa), China, with description of a new species. Quart. J. Taiwan Mus., Taipei **3** 1950 pp. 281–287, 4 figs.

576.—**Chow, C. Y. & Huang, T. C.** The identification of known species of Taiwan (Formosan) fleas (Insecta, Siphonaptera). Quart. J. Taiwan Mus., Taipei **3** 1950 pp. 113–123, 3 pls.

577.—**Christensen, P. J. H.** Studien über die postembryonale Entwicklung bei *Cochlidion limacodes* Hufn. (Fam. Cochlididae, Lepidoptera). K. danske vidensk. Selsk., Copenhagen Biol. Skr. **7** 1950 no. 2 34 [+2] pp. 9 pls. 2 figs.

578.—**Chu, H. F. & Teng, K. F.** Life history of the leafhopper, *Cicadella viridis* (L.) (Homoptera : Cicadellidae). [In Japanese with English summary.] Ann. ent. sinica, Peking **1** 1950 pp. 14–40, 24, figs.

Chudoba, S. see Noskiewicz & Chudoba.

579.—**Chūjō, M.** Erotylid beetles of Aomori Prefecture (the northern end of Honshū, Japan), collected by Mr. K. Shimoyama. Ent. Rev. Japan, Osaka **5** 1950 pp. 15–19, 1 fig. [Col.]

580.—**Chūjō, M. & Kurosawa, Y.** The Buprestidae of Shikoku, Japan (Coleoptera). Trans. Shikoku ent. Soc. **1** 1950 pp. 1–16, 2 figs.

Clancy, D. W. see Marucci & Clancy.

Clark, A. M. see Levenbook & Clark.

581.—**Clark, E. W. & Morishita, F.** C-M medium: a mounting medium for small insects, mites, and other whole mounts. Science, Lancaster, Pa. **112** 1950 pp. 789–790.

582.—**Clark, L. R.** On the abundance of the Australian plague locust *Chortoicetes terminifera* (Walker) in relation to the presence of trees. Aust. J. agric. Res., Melbourne **1** 1950 pp. 64–75. [Orth.]

583.—**Clark, L. R.** The habitats and community relations of the Acrididae of the Trangie District, Central Western New South Wales. Bull. Commw. sci. ind. Res. Org., Melbourne no. 250 1949 20 pp. 3 pls. 2 figs. [Orth.]

584.—**Clarke, J. F. G.** A new genus and three new species of Microlepidoptera from California (Ethmiidae). J. Wash. Acad. Sci., Menasha **40** 1950 pp. 161–163, 3 figs.

- 585.—Clarke, J. F. G. Two new genera and three new species of Microlepidoptera from Argentina (Gelechiidae). J. Wash. Acad. Sci., Baltimore **40** 1950 pp. 285–289, 6 figs.
- 586.—Clastrier, J. Phlébotomes de l'île de Zembra (Tunisie). Arch. Inst. Pasteur Algérie, Algiers **28** 1950 pp. 148–151, 2 pls. 2 figs. [Dipt.]
- 587.—Clausen, C. P. Respiratory adaptations in the immature stages of parasitic insects. Arthropoda, Buenos Aires **1** 1950 pp. 197–224, 23 figs.
- 588.—Clausen, R. L. Observations sur la Cécidomyie de la violette *Dasyneura affinis* Kieffer (Dipt. Cecidomyid.). Mitt. schweiz. ent. Ges., Berne **23** 1950 pp. 200–206, 4 figs.
- 589.—Clay, T. Some problems in the evolution of a group of ectoparasites. Evolution, Lancaster, Pa. **3** (1949) 1950 pp. 279–299, 3 figs. [Malloph.]
- 590.—Clay, T. A preliminary survey of the distribution of the Mallophaga ("feather lice") on the class Aves (Birds). J. Bombay nat. Hist. Soc. **49** 1950 pp. 430–443, 2 pls., 3 figs.
- 591.—Clay, T. & Hopkins, G. H. E. The early literature on Mallophaga (Part I). Bull. Brit. Mus. (Nat. Hist.), London Ent. **1** 1950 pp. 221–272, 2 pls. 63 figs.
- Clément, G. see Grassé, Noirot, Clément & Buchli.
- 592.—Cleu, H. Le peuplement en Lépidoptères du bassin supérieur de la Durance (Briançonnais). Mém. Mus. Hist. nat., Paris (N.S.) **20** 1947 pp. 141–188.
- 593.—Cleu, H. Les faunes entomologiques méditerranéennes dans le bassin du Rhône et leurs rapports avec les éléments de la flore. Mém. Mus. Hist. nat., Paris (N.S.) **30** 1950 pp. 243–266.
- 594.—Coaton, W. G. H. *Cryptotermes* of the Union of South Africa (with key to the South African wood-inhabiting termites). J. ent. Soc. Sthn Africa, Pretoria **13** 1950 pp. 3–32, 4 figs.
- 595.—Cobben, R. H. Hemiptera Heteroptera : soorten uit Limburg, nieuw voor de Nederlandse fauna. Natuurh. Maandbl., Maastricht **39** 1950 pp. 83–84, 1 fig.
- 596.—Cobos, A. Materiales para el catálogo de los Bupréstidae (Ins. Coleópteros) de España.—Estudios sobre especies de la provincia de Málaga. Bol. Soc. esp. Hist. nat., Madrid **47** (1949) 1950 pp. 433–467, 5 figs.
- 597.—Cobos, A. Datos para el catálogo de los coleópteros de España. Especies de los alrededores de Málaga. Bol. Soc. esp. Hist. nat., Madrid **47** (1949) 1950 pp. 563–609, 8 figs.
- 598.—Cobos, A. Nuevas especies del género *Tetragonoschema* Thoms. (Col. Buprestidae, Anthaxini). Graellsia, Madrid **7** 1949 pp. 9–17, 4 figs.
- 599.—Cockayne, E. A. Aberrations of British Lepidoptera (Geometridae). Entomologist, London **83** 1950 pp. 49–55, 1 pl.
- Coda, D. see Correa, Lima & Coda.
- 600.—Coe, R. L. On the Syrphidae (Diptera) of Moses Harris. Entomologist, London **83** 1950 pp. 149–160. Supplementary notes by J. E. Collin pp. 160–161.
- 601.—Coe, R. L. *Criorrhina oxyacanthae* Meig. a variety of *C. berberina* F. (Dipt., Syrphidae). Ent. mon. Mag., London **86** 1950 pp. 124–126, 5 figs.
- 602.—Coe, R. L., Freeman, P. & Mattingly, P. F. Handbooks for the identification of British insects. Diptera 2. Nematocera: families Tipulidae to Chironomidae. London, R. ent. Soc. **9** 1950 pt. 2 pp. 1–216, 199 figs.
- 603.—Coher, E. I. Correction : a new genus of fungus gnats (Diptera : Mycetophilidae). Rev. Ent., Rio de Janeiro **21** 1950 p. 114.
- 604.—Coher, E. I. Neotropical *Mycomyia*. I. (Diptera : Mycetophilidae). Rev. Ent., Rio de Janeiro **21** 1950 pp. 561–580, 15 figs.
- Coher, E. I. see Lane & Coher,

605.—Cohic, F. Activité saisonnière de la faune économique Néo-Calédonienne. Rev. franç. Ent., Paris **17** 1950 pp. 81–87, 1 chart.

606.—Cohic, F. *Araecerus vielardi* Montr., parasite du tabac en Nouvelle-Calédonie. Rev. franç. Ent., Paris **17** 1950 pp. 88–92, 7 figs. [Col.]

607.—Coiffait, H. Les *Speonomus* (s. str.) des Pyrénées occidentales françaises (Coleoptera Bathysciidae). Publ. Mus. Hist. nat., Paris no. 8 1947 pp. 65–74, 41 figs.

608.—Coiffait, H. Nouveaux Coléoptères aveugles des Pyrénées françaises. Publ. Mus. Hist. nat., Paris no. 8 1947 pp. 75–82, 21 figs.

Colaço see Feijó Colaço, A. T.

609.—Colas, G. Un *Duvalius* nouveau des Alpes Maritimes (Col. Trechidae). Publ. Mus. Hist. nat., Paris no. 11 1948 pp. 59–60, 1 fig.

610.—Cole, A. C. Some observations on *Stenomma* Westwood (Hymenoptera : Formicidae). J. Tenn. Acad. Sci., Nashville **25** 1950 p. 297.

611.—Cole, A. C. & Gillespie, D. S. Mecoptera records from Tennessee. J. Tenn. Acad. Sci., Nashville **25** 1950 pp. 84–85.

Cole, A. C. see Gillespie & Cole.

612.—Coles, M. D. Aquatic larvae of the Diptera. Salm. Trout Mag., London **128** 1950 pp. 57–61.

Coles, M. see Fraenkel, Blewett & Coles.

Coll see Español Coll.

613.—Collart, A. Notules diptérologiques.—II. Bull. Inst. Sci. nat. Belg., Brussels **26** 1950 no. 46, 8 pp., 1 fig.

614.—Collenette, C. L. A revision of the genus *Eloria* Walker (Heterocera, Lymantriidae). Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 813–865, 3 pls.

615.—Colless, D. H. An improved method for mounting mosquito larvae. Nature, London **166** 1950 pp. 486–487. [Dipt.]

616.—Collin, J. E. Notes on Trypetidae (Diptera). Ent. Rec., London **62** 1950 pp. 69–71,

617.—Collin, J. E. A second British species of *Myolepta* (Diptera, Syrphidae). J. Soc. Brit. Ent., Bournemouth **3** 1950 pp. 133–137.

618.—Collin, J. E. *Litophasia hyalinipennis* Fallén (Diptera), a Tachinid new to Britain. J. Soc. Brit. Ent., Bournemouth **3** 1950 pp. 201–203.

619.—Collin, J. E. A new Palaeoarctic species of *Chersodromia* with very short wings (Diptera : Empididae). Proc. R. ent. Soc. London (B) **19** 1950 pp. 78–79.

Collin, J. E. see Coe, R. L.

Collins, R. J. see Bradley, Collins & Fletcher.

620.—Colyer, C. N. Notes on the breeding of *Diploneura pilosella* Schmitz and *Megaselia rufipes* Mg. (Dipt., Phoridae) and on the puparium of the former. Ent. mon. Mag., London **86** 1950 pp. 320–322, 1 fig.

621.—Comstock, W. P. & Brown, F. M. Geographical variation and subspeciation in *Heliconius charitonius* Linnaeus (Lepidoptera Nymphalidae). Amer. Mus. Novit., New York no. 1467 1950 21 pp. 3 figs.

622.—Comstock, W. P. & Huntington, E. I. Origins and relationships of Mexican and Antillean Papilioidea (Lepidoptera). An. Inst. Biol., Mexico **20** (1949) 1950 pp. 385–391.

623.—Comte Sart, A. Hallazgo de la *Cicindela melancholica* F. en Mallorca. Graellsia, Madrid **7** 1949 pp. 25–26. [Col.]

624.—Condé, B. Description préliminaire d'un Campodéidé cavernicole du Pays basque espagnol. Bull. Mus. Hist. nat., Paris (2) **21** (1949) 1950 pp. 569–573, 2 figs. [Thysanura.]

625.—Condé, B. Campodéidés du Var et des Alpes-Maritimes. Bull. Soc. linn., Lyon **19** 1950 pp. 128–132, 9 figs. [Thysanura.]

626.—Condé, B. Description d'un Campodéidé cavernicole de Lombardie. Doriania, Genoa **1** 1950 no. 3, 4 pp. 5 figs. [Thysanura.]

627.—Condé, B. Un Protoure inédit du Pays basque et du Portugal. Mem. Estud. Mus. zool. Coimbra no. 198 1950 6 pp. 1 pl.

628.—Condé, B. Campodeidae (Insecta Diplura) d'Afrique du Sud récoltés par le Dr. R. F. Lawrence. Proc. zool. Soc. London **119** 1950 pp. 807-815, 5 figs. [Thysanura.]

629.—Condé, B. Description préliminaire d'un Campodéide cavernicole du causse comtal. Publ. Mus. Hist. nat., Paris no. 8 1947 pp. 33-36, 1 fig. [Thysanura.]

630.—Condé, B. Campodéides nouveaux des grottes balkaniques. Publ. Mus. Hist. nat., Paris no. 8 1947 pp. 17-32, 5 figs. [Thysanura.]

631.—Condé, B. Contribution à la connaissance des Campodéides cavernicoles de France. Publ. Mus. Hist. nat., Paris no. 10 1948 pp. 35-48, 4 figs. [Thysanura.]

632.—Condé, B. Description d'un *Plusiocampa* cavernicole nouveau de l'Herzégovine. Publ. Mus. Hist. nat., Paris no. 10 1948 pp. 49-51, 1 fig. [Thysanura.]

633.—Condé, B. Campodéidés cavernicoles de la région des Appalaches. Publ. Mus. Hist. nat., Paris no. 12 1949 pp. 125-137, 6 figs. [Thysanura.]

634.—Condé, B. Note sur le genre *Oreocampa* (Diploures Campodeidés). Rev. franç. Ent., Paris **17** 1950 pp. 283-284, 4 figs.

635.—Condé, B. & Pagés, J. Un Japygidé nouveau d'Algérie. Bull. ent. Soc. France, Paris **55** 1950 pp. 73-76, 6 figs. [Thysanura.]

636.—Cook, C. Notes on a collection of dragonflies (Odonata) from Nova Scotia. Canad. Ent., Guelph **82** 1950 pp. 190-194.

637.—Cook, S. F. The effect of helium and argon on metabolism and metamorphosis. J. cell. comp. Physiol., Philadelphia **36** 1950 pp. 115-127.

638.—Cooper, K. W. *Zethus, Pachodynerus* and other southern wasps from Massachusetts (Hymenoptera: Vespoidea: Sphecoidea). Ent. News, Lancaster, Pa. **61** 1950 pp. 104-105.

Cooper, K. W. see Demerec, M.

639.—Cooreman, J. Liste des Suctoria (Aphaniptera) récoltés en Belgique. Bull. Inst. Sci. nat. Belg., Brussels **26** 1950 no. 57, 12 pp.

640.—Cooreman, J. Contribution à l'étude des Suctoria du Congo belge. Rev. Zool. Bot. afr., Brussels **43** 1950 pp. 329-335, 7 figs. [Siphonapt.]

Coppel, H. C. see Baldwin & Coppel.

Cordeiro, A. R. see Burla, Brito da Cunha, Cordeiro, Dobzhansky, Malogolowkin & Pavan.

641.—Corporaal, J. B. Some hints for collecting Cleridae (Coleoptera) in tropical countries. Amsterdam Nat. **1** 1950 pp. 35-37, 1 pl.

642.—Corporaal, J. B. Cleridae. Coleopt. Catal. (Suppl.), 's-Gravenhage pars **23** (2nd ed.) 1950 373 pp.

643.—Corporaal, J. B. Ninth and tenth series of notes on systematics and synonymy. Ent. Ber., Amsterdam **13** 1950 pp. 30-31, 59-61. [Col.]

644.—Corporaal, J. B. On some primary homonyms. Ent. Ber., Amsterdam **13** 1950 pp. 93-94. [Col.]

645.—Corrêa, R. R. Descrição de *Anopheles (Kerteszia) montemor* nova espécie de anofelino do Brasil (Diptera, Culicidae). Arq. Hig. Saúde públ., São Paulo **14** 1950 pp. 53-54, 2 figs.

646.—Correa, R. R., Lima, F. O. & Coda, D. Observations on the flight and longevity in nature of *Anopheles albitarvis domesticus*. J. nat. Malar. Soc., Columbia S.C. **9** 1950 pp. 280-284, 2 figs. [Dipt.]

Costa Leite, I. da see Costa Lima & Costa Leite.

647.—Costa Lima, A. da. Insetos do Brasil. 6.^o tomo. Lepidópteros 2.^a partie. Rio de Janeiro, Esc. nac. Agron. 1950 420 pp. 332 figs.

648.—Costa Lima, A. da. Duas vespas de interesse econômico (Hymenoptera, Ichneumonoidea). An. Acad. bras. Cienc., Rio de Janeiro **22** 1950 pp. 317-323, 9 figs.

649.—Costa Lima, A. da. Ninfa de efemerideo fossil do Ceará. An. Acad. bras. Cienc., Rio de Janeiro **22** 1950 pp. 419–420, 1 fig.

650.—Costa Lima, A. da. Duas espécies de *Gitona* predadoras de Coccoideos do gênero *Orthetria* (Diptera: Drosophilidae). Arthropoda, Buenos Aires **1** 1950 pp. 247–253, 3 figs.

651.—Costa Lima, A. da. Nova espécie de *Margarodes* do Brasil (Coccoidea, Margarodidae). Mem. Inst. Osw. Cruz, Rio de Janeiro **47** (1949) 1950 pp. 241–248, 3 pls.

652.—Costa Lima, A. da. Mosca parasita das lagartas do eucalipto (Tachinidae). Rev. Chacaras e Quintais, São Paulo **82** 1950 pp. 167–169, 3 figs.

653.—Costa Lima, A. da. Nota sobre a larva de uma joaninha (Coleoptera, Coccinellidae). Rev. Ent., Rio de Janeiro **21** 1950 p. 592, 1 pl.

654.—Costa Lima, A. da & Costa Leite, I. da. Sobre as espécies de *Spiniger* do grupo *femoralis*. [In Portuguese and English.] Mem. Inst. Oswaldo Cruz, Rio de Janeiro **48** 1950 pp. 143–150. [Hem.]

655.—Costantino, G. Elenco delle Cocciniglie osservate in Sicilia (Hemiptera-Homoptera, Fam. Coccidae). Boll. Zool., Turin **17** 1950 pp. 1–24.

656.—Cott, H. E. A secondary homonym in Thysanoptera (Thysanoptera : Phlaeothripidae). Pan-Pacif. Ent., San Francisco **26** 1950 p. 187.

657.—Couturier, A. L'apiculture de la région landaise (France Sud-ouest). Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 58–65, 8 figs. [Hym.]

658.—Craighead, F. C. and others. Insect enemies of eastern forests. Misc. Publ. U.S. Dep. Agric., Washington, D.C. no. 657 1950 [ii+] 679 pp. 197 figs.

659.—Creighton, W. S. The ants of North America. Bull. Mus. comp. Zool. Harvard **104** 1950 pp. 1–585, 57 pls. [Hym.]

660.—Creighton, W. S. *Polyhomoa* Azuma, a synonym of *Kyidris* Brown (Hymenoptera: Formicidae). Psyche, Cambridge, Mass. **57** 1950 pp. 93–94.

661.—Cretschmar, M. Zur Technik des Entfettens von Schmetterlingen. Z. Lepid., Krefeld **1** 1950 pp. 21–22.

662.—Crèvecœur, A. Sur deux Braconides parasites de *Rhynchaenus (Orcheses) fagi* L. (Col. Curcul.). Bull. Ann. Soc. ent. Belg., Brussels **86** 1950 pp. 230–232.

663.—Crèvecœur, A. & Van Hoegaerden, A. Note sur la nidification de *Megachile pyrenaea* Pérez (Hym. Apidae). Bull. Ann. Soc. ent. Belg., Brussels **86** 1950 pp. 233–235.

Crewe, W. see Gordon & Crewe.

664.—Crouse, H. V. The differential response of male and female germ cells of *Sciara coprophila* (Diptera) to irradiation. Amer. Nat., Lancaster, Pa. **84** 1950 pp. 195–202.

665.—Crouzel, I. S. de. Primer estadio larval de *Doringia acridiorum* (Weyenb.) ; (Diptera ; Sarcophagidae). Arthropoda, Buenos Aires **1** 1950 pp. 291–297, 8 figs.

666.—Crow, J. L. & Roberts, W. C. Inbreeding and homozygosis in bees. Genetics, Menasha **35** 1950 pp. 612–621, 8 figs. [Hym.]

667.—Crowson, R. A. The classification of the families of British Coleoptera. Ent. mon. Mag., London **86** 1950 pp. 149–171, 274–288, 327–344, 68 figs.

Cruz see Silva Cruz.

668.—Csiki, E. Ueber eine neue *Mordellistena* aus der Krim(Coleopt.). Folia ent. hung., Budapest (N.S.) **3** 1949 pp. 45–46.

669.—Cunha, A. B. da, Burla, H. & Dobzhansky, T. Adaptive chromosomal polymorphism in *Drosophila willistoni*. Evolution, Lancaster, Pa. **4** 1950 pp. 212–235, 3 pls. 2 maps. [Dipt.]

670.—Cunha, A. X. da. Contribuição para o estudo da fauna dos Proturos de Portugal. Mem. Estud. Mus. zool. Univ. Coimbra no. 200 1950 14 pp. 2 pls. 7 figs.

Cunha see Brito da Cunha.

671.—Curtis, C. L. Taxonomy and ecology. Ecology, Durham, N.C. **31** 1950 pp. 151–152.

672.—Dalmat, H. T. New species of Simuliidae (Diptera) from Guatemala. I, II. Ann. ent. Soc. Amer., Columbus **42** (1949) 1950 pp. 538–553, 7 pls.; **43** 1950 pp. 137–151, 5 pls.

673.—Damasceno, R. G. & Arouck, R. Estudos sobre *Flebotomus* no vale Amazônico. Parte VII—Descrição de uma nova espécie, *Flebotomus serranus* (Diptera, Psychodidae). Rev. Serv. Saúde públ., Rio de Janeiro **2** 1949 [? 1950] pp. 843–848, 6 figs.

674.—Damasceno, R. G. & Arouck, R. Descrição de uma nova espécie de Flebotomo encontrada no estado da Bahia, *Flebotomus digitatum* (Diptera-Psychodidae). Rev. Serv. Saúde públ., Rio de Janeiro **3** 1950 pp. 465–469, 8 figs.

675.—Damasceno, R. G., Arouck, R. & Causey, O. R. Estudos sobre *Flebotomus* no vale Amazônico. Parte VI—Contribuição ao conhecimento da distribuição geográfica e da incidência por tipo de captura, de 64 espécies identificadas. Rev. Serv. Saúde públ., Rio de Janeiro **2** 1949 [? 1950] pp. 817–842, 65 maps. [Dipt.]

676.—Dammerman, K. W. Nomen conservanda of Coleoptera. I, II. Ent. Ber., Amsterdam **13** 1950 pp. 11–13, 154–155.

677.—Dammerman, K. W. Continuity versus priority in nomenclature. Tijdschr. Ent., Amsterdam **92** (1949) 1950 pp. 34–52.

d'Andretta see Andretta.

678.—D'Angelo, E. G. Salivary gland chromosomes. Ann. New York Acad. Sci. **50** 1950 pp. 910–919, 5 figs.

679.—Daniel, F. Beobachtung über die Lebensweise hochalpiner Vertreter der Gattung *Hepialus* (Lep. Hepialidae). Mitt. münchen. ent. Ges., Munich **40** 1950 pp. 203–206.

680.—Danielli, J. F. The phosphatase of cell nuclei. C.R. 13e Congr. int. Zool. Paris 1948, 1949 p. 205. [Dipt.]

681.—[Danilevskii, A. S.] Photo-periodical reaction of insects under conditions of artificial illumination. [In Russian.] C.R. Acad. Sci. URSS, Moscow (N.S.) **60** 1948 pp. 481–484.

682.—[Danilevskii, A. S. & Glinyanaya, E. I.] The influence of the rhythm of light and temperature on the occurrence of diapause in insects. [In Russian.] C.R. Acad. Sci. URSS, Moscow (N.S.) **71** 1950 pp. 963–966.

683.—[Danilevskii, A. S. & Shel'deshova, G. G.] The biology and morphological peculiarities of the pear fruit destroyer (*Carpocapsa pyrivora* Danilevsky). [In Russian.] Zool. Zh., Moscow **29** 1950 pp. 69–81, 5 figs. [Lep.]

684.—Danneel, R. Melaninbildende Fermente bei *Drosophila melanogaster*. II. Nachweis einer Dehydrase. Neuformulierung der Tyrosinase - Tyrosin - Reaktion. Biol. Zbl., Leipzig **65** 1946 pp. 115–119. [Dipt.]

685.—Dannreuther, T. Migration records, 1949. Entomologist, London **83** 1950 pp. 109–114, 129–133.

686.—Darbois, M. Comparaison des œufs de trois espèces de *Gryllus* et de leurs hybrides. Bull. biol. France-Belg., Paris **84** 1950 pp. 76–100, 10 figs. [Orth.]

687.—Darlington, jr., P. J. Two new Paussid beetles from the Panama Canal Zone and the Philippines. Psyche, Cambridge, Mass. **57** 1950 pp. 68–71, 2 figs. [Col.]

688.—Darlington, jr., P. J. Pausid beetles. Trans. Amer. ent. Soc., Philadelphia **76** 1950 pp. 47–142, 206 figs. 3 maps. [Col.]

689.—Darlow, H. M. Additions to the list of the Lepidoptera of Malta. Entomologist, London **83** 1950 pp. 269–271.

Davey, J. T. see Nash & Davey.

690.—Daviault, L. Action de la température et de l'humidité sur la biologie de *Pristiphora geniculata* Htg. (Hyménoptère, Tenthredinidé). Rev. Canad. Biol., Montreal **6** 1947 pp. 366–371, 1 fig.

691.—**Davies, D. M.** A study of the black fly population of a stream in Algonquin Park, Ontario. Trans. R. Canad. Inst., Toronto **59** 1950 pp. 121–159, 11 figs. [Dipt.]

692.—**Davies, L.** The hatching mechanism of Muscid eggs (Diptera). J. exp. Biol., London **27** 1950 pp. 437–445, 3 figs.

693.—**Davis, J. J.** Two new species of caddis flies (Trichoptera) from Washington State. Ann. ent. Soc. Amer., Columbus **42** (1949) 1950 pp. 448–450, 7 figs.

694.—**Day, M. F.** The histology of a very large insect, *Macropanesthia rhinocerus* Sauss. (Blattidae). Aust. J. Sci. Res., Melbourne (B) **3** 1950 pp. 61–75, 4 pls. 2 figs. [Orth.]

Dean, G. A. see Smith & Dean.

Deane, L. M. & M. P. see Causey & Deane.

de Beaumont see Beaumont.

Deboutteville see Delamare-Deboutteville.

695.—**De Buen, A. M.** Algunas observaciones sobre la citología de las glándulas protorácticas de *Halyssidota caryae* Harr. (Lepidoptera). An. Inst. Biol. Mexico **20** (1949) 1950 pp. 465–472, 13 figs.

696.—**De Carlo, J. A.** Géneros y especies de la subfamilia Ambrysinae Usinger (Hemiptera-Naucoridae). An. Soc. cient. Argent., Buenos Aires **150** 1950 pp. 3–27, 7 figs.

697.—**De Carlo, J. A.** Descripción de especies nuevas de "Ranatridae" y "Belostomidae" y algunas aclaraciones referentes a otras conocidas (Hemiptera). Rev. bras. Biol., Rio de Janeiro **10** 1950 pp. 521–532, 19 figs.

de Fluiter see Fluiter.

698.—**De Laever, E.** Genitalia d'Hesperiidae. Lambillionea, Brussels **50** 1950 pp. 43–44, 1 pl.

699.—**Delamere-Deboutteville, C.** Contributions à l'étude biologique de la Camargue. Collemboles nouveaux du sol des Bois des Rièges. Bull. Mus. Hist. nat. Marseille **8** 1948 pp. 177–182, 11 figs.

700.—**Delamere - Deboutteville, C.** Notes faunistiques sur les Collemboles de France. VIII. Collemboles de la grotte de La Balme récoltés par M. R. Ginet. Bull. Soc. linn. Lyon **19** 1950 pp. 122–123, 6 figs.

701.—**Delamare - Deboutteville, C.** Deux nouvelles espèces de Collemboles du Mont Nimba (Guinée française) récoltées par M. Maxime Lamotte. Bull. Soc. zool. Fr., Paris **75** 1950 pp. 43–45, 11 figs.

702.—**Delamare - Deboutteville, C.** Collemboles récoltés par Ch. Alluaud et R. Jeannel en Afrique orientale 1911–1912. Première note. Les *Pseudachorutes* et les *Ceratrimera*. Mém. Mus. Hist. nat., Paris (N.S.) **21** (1945) 1946 pp. 153–174, 12 figs.

703.—**Delamare - Deboutteville, C.** *Salina insignis* (Handschin) collembole commensal d'un Thysanoptère à Madagascar. Nat. Malgache, Tana-narive **2** 1950 pp. 107–109, 4 figs.

704.—**Delamare - Deboutteville, C.** Sur la présence du genre *Acherontiella Absolon* dans les grottes de l'Ardèche et du Gard. Publ. Mus. Hist. nat., Paris no. 11 1948 pp. 49–56, 18 figs. [Collemb.]

705.—**Delamare - Deboutteville, C.** Collemboles cavernicoles du Tennessee et de l'Alabama. Publ. Mus. Hist. nat., Paris no. 12 1949 pp. 117–124, 18 figs.

706.—**Delamare - Deboutteville, C.** Notes faunistiques sur les Collemboles de France (septième note). Rev. franç. Ent., Paris **17** 1950 pp. 42–47, 14 figs.

707.—**Delamare - Deboutteville, C.** Observations sur le comportement de *Pseudostilpon delamarei* Séguin (Dipt. Empididae). Vie et Milieu, Paris **1** 1950 pp. 88–90, 1 fig.

Delamare-Deboutteville, C. see Paulian & Delamare-Deboutteville; Petit & Delamare-Deboutteville.

708.—**Delamare - Deboutteville, G.** Sur le régime alimentaire des Zorapétères et leur prédateur *Hoplitocoris camerunensis* Jeannel. Bull. sci. Bourgogne, Dijon **11** (1946–1947) 1948 pp. 97–98.

709.—**Delattre, R.** Description d'un Bryocorinae (Hem. Miridae) nouveau d'Afrique occidentale. Bull. Mus. Hist. nat., Paris (2) **22** 1950 pp. 263–265, 1 fig.

710.—**De Lerma, B.** Rivelazione fluorospettografica della riboflavina nel sangue degli Ortotteri. Boll. Zool., Turin **16** 1949 pp. 77–81.

711.—**De Lerma, B.** Sulla presenza di cellule giganti nel cerebro e nella massa gangliare sottoesofagea dei Coleotteri. Boll. Zool., Turin **16** 1949 pp. 169–177, 2 figs.

de Lesse see Lesse.

712.—**Deleurance, E. P.** Sur le mécanisme de la monogynie fonctionnelle chez les *Polistes* (Hyménoptères-Vespides). C.R. Acad. Sci., Paris **230** 1950 pp. 782–784.

713.—**Deleurance, E. P.** Sur la nature et le déterminisme du couvain abortif chez les *Polistes* (Hyménoptères Vespides). C.R. Acad. Sci., Paris **231** 1950 pp. 1565–1567.

714.—**Delève, J.** Mission scientifique de l'Omo. Coleoptera XII. Dryopidae. Mém. Mus. Hist. nat., Paris (N.S.) **19** 1945 pp. 323–330, 4 figs.

715.—**Delkeskamp, K.** Erotylidae (Coleoptera Clavicornia). Explor. Parc nat. Albert, Miss. de Witte (1933–1935), Brussels fasc. 70 pp. 9–12.

716.—**Delkeskamp, K.** 10. Zur Morphologie und Taxonomie der Gattung *Plagiopisthen* Thoms. (mit Bestimmungstabelle und alphabetischem Verzeichnis der Arten) (Col. Erotyl.). Rev. Zool. Bot. afr., Brussels **44** 1950 pp. 105–116, 8 figs.

717.—**Delmas, R. & Rambier, A.** Une espèce nouvelle de Decticiniae (Orth.) de France méridionale. Bull. Soc. ent. France, Paris **55** 1950 pp. 7–9, 1 fig.

718.—**Delmas, R. & Rambier, A.** Notes orthoptérologiques. Bull. Soc. ent. France, Paris **55** 1950 pp. 35–40.

719.—**DeLong, D. M.** The genera *Baldulus* and *Dalbulus* in North America including Mexico (Homoptera : Cicadellidae). Bull. Brooklyn ent. Soc., Lancaster, Pa. **45** 1950 pp. 105–116, 2 pls.

720.—**DeLong, D. M. & Ross, H. H.** A new species of *Dikraneura* from witch-hazel (Homoptera-Cicadellidae). Ohio J. Sci., Columbus **50** 1950 pp. 86–87, 1 fig.

721.—**DeLong, D. M. & Ruppel, R. F.** A new genus *Eupterella* and five new species of leafhoppers related to *Cicadella* (Homoptera-Cicadellidae). Ohio J. Sci., Columbus **50** 1950 pp. 239–243, 1 pl.

722.—**DeLong, D. M. & Severin, H. H. P.** *Texananus incurvatus*. I. Taxonomy. Hilgardia, Berkeley **19** 1950 pp. 541–543, 2 col. pls. 1 fig. [Hem.]

DeLong, D. M. see Ross & DeLong.

723.—**De Lotto, G.** Sulla presenza di una ghiandola ripugnatoria in due Ortotteri del genere *Phymateus*. Boll. Soc. ital. Med. Ig. trop., Asmara **10** 1950 pp. 195–201, 4 figs.

724.—**De Lucca, C.** A contribution to the list of Maltese Lepidoptera. Ent. mon. Mag., London **86** 1950 pp. 232–233.

725.—**De Lucca, C.** Casual immigrant Rhopalocera in Malta. Entomologist, London **83** 1950 pp. 64–65.

726.—**De Lucca, C.** Additional records of Micro-Lepidoptera from Malta. Entomologist, London **83** 1950 pp. 249–251.

727.—**De Meillon, B.** Notes on Siphonaptera. J. ent. Soc. sthn Africa, Pretoria **13** 1950 pp. 33–36, 1 fig.

728.—**De Meillon, B.** The Madagascan Siphonaptera. Mém. Inst. sci. Madagascar, Tananarive (A) **4** 1950 pp. 67–73.

729.—**De Meillon, B.** New South African Simuliidae (Diptera). Proc. R. ent. Soc. London (B) **19** 1950 pp. 14–17, 3 figs.

730.—**Demerec, M. [Ed.]** Biology of *Drosophila*. New York, J. Wiley & Sons, Inc. & London, Chapman & Hall, Ltd., 1950 x & 632 pp. illus.

731.—**Denis, J. R.** Sur la faune française des Aptérygotes (XXIIIe, XXVe, notes). Bull. sci. Bourgogne, Dijon **11** (1946–1947) 1948 pp. 45–51, 3 figs.; [Collemb., Thysanura.] Suppl. no. 1 1947 9 pp. 4 pls.; Suppl. no. 5 1950 4 pp. 1 fig.

732.—Denis, J. R. Contribution à l'étude de trois Collemboles : *Sminthurides pumilis* (Krausb.), *Sminthurinus krausbaueri* C.B. et *Tullbergia bipartita* E.H. Bull. sci. Bourgogne, Dijon Suppl. no. 4 1948 15 pp. 5 pls.

733.—Denis, J. R. Croisière du Bougainville aux îles australes françaises. XV. Collemboles. Mém. Mus. Hist. nat., Paris (N.S.) 20 1947 pp. 31–51, 50 figs.

734.—Denis, J. R. & Jeannenot, F. Sur une *Cephalonomia* (Hym. Béthylide) à mâles dimorphes, ailés et brachyptères. Bull. sci. Bourgogne, Dijon Suppl. no. 7 1950 6 pp. 1 pl.

735.—Dennell, R. Epicuticle of blow-fly larvae. Nature, London 165 1950 p. 275. [Dipt.]

736.—Denning, D. G. Records and descriptions of Nearctic caddis flies. Part I. Bull. Brooklyn ent. Soc., Lancaster, Pa. 45 1950 pp. 97–104, 1 pl. [Trichopt.]

737.—Denning, D. G. Records and descriptions of Nearctic caddis flies. Part II. J. Kansas ent. Soc., Manhattan 23 1950 pp. 115–120, 1 pl.

738.—Denninger, E. Zur Synonymie einiger Dolichopodidenarten (Dipt.). Jh. Ver. vaterl. Naturk. Württemb., Stuttgart 102–105 (1946–1949) 1950 pp. 42–48.

739.—Deptá, V. About the species of the subgenus *Gabrius* genus *Philonthus* in Slovakia (Coleoptera). [In Czech with English summary.] Prírod. Sborník, Bratislava 4 1949 pp. 107–118, 2 pls.

740.—De Santis, L. Dos notas sobre Calcidoideos argentinos (Hymenoptera : Chalcidoidea). Notas Mus. La Plata 14 (Zool.) 1949 no. 127 pp. 275–281, 1 fig.

741.—De Santis, L. Descripción de un nuevo Eupelmido de la República Argentina (Hymenoptera : Chalcidoidea). Notas Mus. La Plata 15 (Zool.) 1950 no. 130 pp. 1–5, 2 figs.

742.—De Santis, L. Comensalismo, Predadorismo y Parasitismo relacionado con el bicho de cesto (*Oiketis*

cus kirbyi Guild.) Notas Mus. La Plata 15 (Zool.) 1950 no. 132 pp. 17–36, 1 fig.

743.—De Santis, L. Lista de sinonimias establecidas para los géneros y sub-géneros de Chalcidoidea (Hymenoptera). Rev. Mus. La Plata 6 (Zool.) 1950 no. 37 pp. 47–67.

744.—Descarpentries, A. Revision des Buprestides de la région malgache appartenant à la tribu des Chrysobothrini. Nat. malgache, Tananarive 2 1950 pp. 7–45, 1 col. pl. 16 figs. [Col.]

Deschamps, I. see Bachstez & Deschamps.

de Sousa see Sousa.

745.—Despax, R. Études biospéologiques XXXII. Trichoptera de Transylvanie. Bull. Inst. Sci. nat. Belg., Brussels 26 1950 no. 4, 8 pp.

746.—Dethier, V. G. & Chadwick, L. E. An analysis of the relationship between solubility and stimulating effect in tarsal chemoreception. J. gen. Physiol., Baltimore 33 1950 pp. 589–590, 1 fig. [Dipt.]

Dethier, V. G. see Hassett, Dethier & Gans.

747.—Deurs, W. van. Sommerfugle. VII. Fjermol. Danmarks Fauna, Copenhagen 52 1948 56 pp. 6 pls. 55 figs. [Lep.]

748.—Dewailly, P. Coléoptères Melolonthini de Madagascar. Mém. Inst. sci. Madagascar, Tananarive 4A 1950 pp. 209–453, 120 figs.; also Thèse Ecole nat. vét. Alfort, Paris 1950 253 [+1] pp. 120 figs.

de Wilde see Wilde.

749.—Diakonoff, A. A revision of the family Ceracidae (Lepidoptera Tortricoidea). Bull. Brit. Mus. (Nat. Hist.), London Ent. 1 1950 pp. 173–219, 34 figs.

750.—Diakonoff, A. The type specimens of certain oriental Eucosmidae and Carposinidae (Microlepidoptera) described by Edward Meyrick together with descriptions of new Eucosmidae and Carposinidae in the British Museum (Natural

History). Bull. Brit. Mus. (Nat. Hist.), London Ent. 1 1950 pp. 275-300, 6 pls. 2 figs.

751.—**Dickinson, jr., J. C.** An ecological reconnaissance of the biota of some ponds and ditches in northern Florida. Quart. J. Florida Acad. Sci., Tallahassee 11 (1948) 1949 no. 2-3 pp. 1-28, 1 map 4 figs.

752.—**Dickson, R. C.** Factors governing the induction of diapause in the Oriental fruit moth. Ann. ent. Soc. Amer., Columbus 42 (1949) 1950 pp. 511-537, 2 figs. [Lep.]

753.—**Dillon, L. S.** A new species of *Epicauta* from Arizona (Col.: Meloidae). Ent. News, Lancaster, Pa. 61 1950 pp. 103-104.

754.—**Dillon, L. S. & E. S.** The Lamiine tribe Gnomini (Coleoptera, Cerambycidae). Philipp. J. Sci., Manila 79 1950 pp. 11-55, 3 pls.

755.—**Dinther, J. B. M. van.** Morphologie en biologie van de schildluis *Chionaspis salicis* L. Tijdschr. PlZiekt., Wageningen 56 1950 pp. 173-252, 10 figs. [Hem.]

756.—**Dirsh, V. M.** Two new African injurious grasshoppers. Bull. ent. Res., London 41 1950 pp. 317-320, 16 figs. [Orth.]

757.—**Dirsh, V. M.** A contribution to the fauna of Acrididae of Syria and neighbouring countries. Eos, Madrid 26 1950 pp. 55-71, 6 figs. 1 map. [Orth.]

758.—**Dirsh, V. M.** A new species of the genus *Dericorys* (Serville), (Orthoptera, Acrididae). Proc. R. ent. Soc. London (B) 19 1950 pp. 18-20, 8 figs.

759.—**Dirsh, V. M.** A practical table for the determination of sexes of nymphs of *Locusta migratoria migratorioides* (R. & F.) (Orthoptera: Acrididae). Proc. R. ent. Soc. London (B) 19 1950 pp. 136-138, 2 figs.

760.—**Dispons, P.** Révision des *Oncocephalus* de l'Afrique du Nord (Hem. Reduviidae). Rev. franç. Ent., Paris 17 1950 pp. 256-262.

761.—**Dittrich, W., Höhne, G., Paul, W. & Schubert, G.** Ueber die Auslösung rezessiv-geschlechtsgebundener Letalfaktoren bei *Drosophila* durch schnelle Elektronen einer 6 MeV-Betatron. Naturwissenschaften, Berlin 37 1950 pp. 545-566. [Dipt.]

762.—**Diabola, J.** A revision of leaf-hoppers in Melichar's collection. [In Czech with English summary.] Acta Mus. morav., Brno 35 1950 pp. 167-182, 1 pl. [Hem.]

763.—**Diabola, J.** Some records of leaf-hoppers from Slovakia. Homoptera, Auchenorrhyncha. [In Czech with English summary.] Acta Soc. ent. Čsl., Prague 47 1950 pp. 65-67.

Dobzhansky, A. R. see Burla, Brito da Cunha, Cordeiro, Dobzhansky, Malogolowkin & Pavan.

764.—**Dobzhansky, T.** Genetics of natural populations. XIX. Origin of heterosis through natural selection in populations of *Drosophila pseudoobscura*. Genetics, Menasha 35 1950 pp. 288-302. [Dipt.]

765.—**Dobzhansky, T.** Genetic structure of natural populations. Yearb. Carnegie Inst. Washington no. 48 (1948-1949) 1949 pp. 201-213, 1 fig. [Dipt.]

766.—**Dobzhansky, T., Burla, H. & Brito da Cunha, A.** A comparative study of chromosomal polymorphism in sibling species of the *willistoni* group of *Drosophila*. Amer. Nat., New York 84 1950 pp. 229-246, 11 figs. [Dipt.]

767.—**Dobzhansky, T. & Pavan, C.** Local and seasonal variations in relative frequencies of species of *Drosophila* in Brazil. J. Anim. Ecol., London 19 1950 pp. 1-14, 1 fig. [Dipt.]

Dobzhansky, T. see Burla, Brito da Cunha, Cavalcanti, Dobzhansky & Pavan; Cunha, Burla & Dobzhansky; Pavan, Dobzhansky & Burla; Spassky, Zimmering & Dobzhansky; Spassky & Dobzhansky.

768.—**Docters van Leeuwen, W. M.** De in Nederland voorkomende door Hymenoptera gevormde gallen. Ent. Ber., Amsterdam 13 1950 pp. 22-24.

769.—Docters van Leeuwen, W. M. Zoöcecidia van het eiland Terschelling. Tweede mededeling. Ent. Ber., Amsterdam **13** 1950 pp. 168–173.

770.—Doets, C. Biology and variation of *Eidophasia messingiella* F.R. (Lep., Plutellidae). Ent. Ber., Amsterdam **13** 1950 pp. 85–86, 6 figs.

771.—Doets, C. Notes on Lepidoptera, 1949. Ent. Ber., Amsterdam **13** 1950 pp. 163–167, 9 figs.

772.—Döhler, W. Zur Kenntnis der Gattung *Rhyacophila* im mittel-europäischen Raum (Trichoptera). Arch. Hydrobiol., Stuttgart **44** 1950 pp. 271–293.

773.—Dollfus, R. P. & Théodoridès, J. Mermithidé (Nematoda) chez un *Anthaxia quadripunctata* (L. 1758) (Coléop. Buprestidae) d'Europe centrale. Entomologiste, Paris **6** 1950 pp. 96–99, 3 figs.

774.—Donisthorpe, H. An eighth instalment of the Ross collection of ants from New Guinea. Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 338–341. [Hym.]

775.—Donisthorpe, H. Two new species of ants and a few others from Turkey. Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 638–640. [Hym.]

776.—Donisthorpe, H. A first instalment of the ants of Turkey. Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 1057–1067. [Hym.]

777.—Donisthorpe, H. Two new species of ants from Turkey. Ent. Rec., London **62** 1950 pp. 60–61. [Hym.]

778.—Donisthorpe, H. Two more new ants from Turkey. Ent. Rec., London **62** 1950 pp. 68–69. [Hym.]

779.—Dotterweich, H. Die Auslösung von Mutationen durch Follikelhormon und zusätzlichen Wärme-schock bei *Drosophila melanogaster*. Biol. gen., Vienna **17** 1944 pp. 419–446, 2 figs. [Dipt.]

780.—Doucet, J. Les Culicinés de Madagascar (Dipt.). Mém. Inst. sci. Madagascar, Tananarive **4A** 1950 pp. 39–65, 14 figs.

781.—Doutt, R. L. & Smith, R. A. Males and intersexes in a normally thelyotokous insect, *Tropidophryne melvillei* Compere (Hymenoptera, Encyrtidae). Canad. Ent., Guelph **82** 1950 pp. 165–170, 1 fig.

Doutt, R. L. see Hagen & Doutt.

782.—Dowdy, W. W. A community study of an oak-hickory association with special reference to invertebrates. Amer. Midl. Nat., Notre Dame **43** 1950 pp. 667–695, 5 figs.

783.—Dowdy, W. W. An ecological study of the Arthropoda of an oak-hickory forest with special reference to stratification. Ecology, Durham, N.C. **28** 1947 pp. 418–439, 2 figs.

784.—Downes, J. A. Habits and life-cycle of *Culicoides nubeculosus* Mg. Nature, London **166** 1950 pp. 510–511. [Dipt.]

785.—Downs, W. G. Morphological notes on *Anopheles aquasalis* Curry and *Anopheles osvaldoi* Peryassú. Mosq. News, Albany, N.Y. **10** 1950 pp. 29–30, 6 figs. [Dipt.]

Downs, W. G. see Vargas & Downs.

786.—Drake, C. J. Concerning North American Saldidae (Hemiptera). Ark. Zool., Stockholm **42B** 1950 no. 3 pp. 1–4.

787.—Drake, C. J. Concerning the Cantacaderinae of the world (Hemiptera: Tingidae). Arthropoda, Buenos Aires **1** 1950 pp. 153–166, 3 figs.

788.—Drake, C. J. Concerning North American Saldidae (Hemiptera). Bull. Brooklyn ent. Soc. **45** 1950 pp. 1–7.

789.—Drake, C. J. A new Tingid from the Canal Zone (Hemiptera). Proc. ent. Soc. Washington **52** 1950 pp. 299–300.

790.—Drake, C. J. Some American Saldidae (Hemiptera). Psyche, Cambridge, Mass. **56** (1949) 1950 pp. 187–193, 1 pl.

791.—Drake, C. J. & Hottes, F. C. Saldidae of the Americas (Hemiptera). Great Basin Nat., Provo **10** 1950 pp. 51–61, 3 figs.

792.—Drake, C. J. & Salmon, J. T. A new genus and two new species of Peloridiidae (Homoptera) from New Zealand. Zool. Publ. Victoria Univ. Coll., New Zealand no. 6 1950 7 pp. 2 figs.

793.—Draudt, M. Beiträge zur Kenntnis der Agrotiden-Fauna Chinas. Aus den Ausbeuten Dr. H. Höne's. Mitt. münchen. ent. Ges., Munich **40** 1950 pp. 1-174, 18 pls. [Lep.]

794.—Dreisbach, R. R. New species in the genus *Anoplius*, *Pycnopompilus*, and *Stretosella*, n. gen. (Hymenoptera : Psammocharidae) with keys and microphotographs of the genitalia of the males of these genera and *Agenioideus* for North America and the Antilles. Amer. Midl. Nat., Notre Dame **43** 1950 pp. 570-599, 36 figs.

795.—Dreisbach, R. R. A new species and new variety in the genus *Priochilus* Banks (Hymenoptera : Psammocharidae) with a key to the species of North America and the Antilles. Bull. Brooklyn ent. Soc., Lancaster, Pa. **45** 1950 pp. 50-59.

796.—Dreisbach, R. R. A new species in the genus *Alasagenia* Banks (Hymenoptera : Psammocharidae) with a key to the species of North America. Ent. News, Lancaster, Pa. **61** 1950 pp. 68-71.

797.—Dreisbach, R. R. A new species of the genus *Lissagenia* Banks (Hymenoptera : Psammocharidae) from Central America. Ent. News, Lancaster, Pa. **61** 1950 pp. 93-96.

Dresden, D. see Krijgsman, Dresden & Berger.

798.—Dresner, E. The toxic effect of *Beauveria bassiana* (Bals.) Vuill. on insects. J. New York ent. Soc., Lancaster, Pa. **58** 1950 pp. 269-278.

799.—Dreux, P. Influence des ions K et Ca sur l'automatisme du vaisseau dorsal de la chenille de *Galleria mellonella* L. C.R. Soc. Biol., Paris **144** 1950 pp. 803-804. [Lep.]

800.—Dreux, P. Action de la concentration totale des solutions sur l'automatisme du vaisseau dorsal de la chenille de *Galleria mellonella* L. C.R. Soc. Biol., Paris **144** 1950 pp. 804-806. [Lep.]

801.—Dreux, P. & Fiszer, J. Action du baryum sur l'automatisme cardiaque de la chenille de *Galleria mellonella* L. et de *Gryllus domesticus* L. C.R. Soc. Biol., Paris **144** 1950 pp. 818-819. [Lep., Orth.]

802.—Drilhon, A. & Busnel, R. G. Discrimination des acides aminés libres dans l'oeuf de *Bombyx mori* L. C.R. Acad. Sci., Paris **230** 1950 pp. 1114-1116. [Lep.]

Duarte see Escobar Duarte.

803.—[Dubinin, V. B.] Investigations on the adaptation of ectoparasites. II. Ecological adaptations of feather mites and down-eaters. [In Russian.] Parasit. Sborn., Moscow **9** 1948 pp. 191-222, 7 figs. [Anopl.]

Duchâteau, G. see Florkin, Duchâteau & Leclercq.

804.—Dufay, C. Chasse de Coléoptères et de Lépidoptères à la lampe à vapeur de mercure. Bull. Soc. linn. Lyon **19** 1950 pp. 44-45.

805.—Dujardin, F. Le génèse quaternaire et monographie raisonnée des races de *Lysandra hispana* H.-S. (= *albicans* H.-S.= *arragonensis* Gerh., = *coeruleascens* Tutt.). (Suite.) Lambillionea, Brussels **50** 1950 pp. 22-28.

806.—Dumbleton, L. J. A new sub-species of *Lallemandana fenestrata* (F.) (Homoptera : Cercopidae). Proc. Hawaii. ent. Soc., Honolulu **14** (1949) 1950 pp. 59-61, 4 figs.

807.—Dupont-Raabe, M. Les migrations des pigments oculaires chez le phasme. C.R. Acad. Sci., Paris **230** 1950 pp. 873-874. [Orth.]

808.—Dupuis, C. Origine et développement des organes génitaux externes des mâles d'insectes. Année biol., Paris (3) **26** 1950 pp. 21-36.

809.—Dupuis, C. Contributions à l'étude des Phasiinae cimicophages (Diptères Larvaevoridae). X. Bull. biol. France-Belg., Paris **84** 1950 pp. 194-206.

810.—**Dupuis, C.** Notes synonymiques et systématiques sur les Phasiinae (Diptères Larvaevoridae) III. Bull. Mus. Hist. nat., Paris (2) **21** (1949) 1950 pp. 553–557.

811.—**Dupuis, C.** Contributions à l'étude des Phasiinae cimicophages (Diptères Larvaevoridae) — XI. Notes synonymiques et systématiques. Bull. Mus. Hist. nat., Paris (2) **22** 1950 pp. 590–595.

812.—**Dupuis, C.** Sur une prétenue phase subimaginaire dans le développement de certains Hémiptères-Hétéroptères. C.R. Acad. Sci., Paris **231** 1950 pp. 879–880.

813.—**Dupuis, C.** Données nouvelles sur la morphologie abdominale des Hémiptères Hétéroptères et en particulier des Pentatomoidea. C.R. 13e Congr. int. Zool. Paris 1948, 1949 pp. 471–472.

814.—**Dupuis, C.** Types morphologiques des larves de Phasiinae cimicophages (Diptères Larvaevoridae). C.R. 13e Congr. int. Zool. Paris 1948, 1949 pp. 472–473.

815.—**Durand, M. C.** Contribution à l'étude de la gamétogénèse des Gryllidae. C.R. Acad. Sci., Paris **230** 1950 pp. 2335–2336, 1 fig. [Orth.]

816.—**Duret, J. P.** Lista de los mosquitos de la República Argentina (Diptera, Culicidae). Rev. Soc. ent. argent., Buenos Aires **14** 1950 pp. 297–318.

817.—[**Duseeva, N. D.**] The nature of the high mutability of the gene Yellow in natural populations of *Drosophila melanogaster*. [In Russian.] C.R. Acad. Sci. URSS, Moscow (N.S.) **60** 1948 pp. 457–460. [Dipt.]

818.—**Duspiva, F.** Die enzymatischen Vorgänge beim Durchbruch des ausschlüpfenden Seidenspinners (*Bombyx mori* L.) durch die Kokonwand. Z. Naturf., Tübingen **5b** 1950 pp. 273–281, 2 figs. [Lep.]

819.—**Eads, R. B.** A new *Orchopeas* Jordan (Siphonaptera) from the fox squirrel, *Sciurus niger* Linnaeus. Ann. ent. Soc. Amer., Columbus **43** 1950 pp. 46–48, 10 figs.

820.—**Eads, R. B. & Hightower, B. G.** Arthropods of possible medical significance collected in Terrel County, Texas. Ent. News, Lancaster, Pa. **61** 1950 pp. 106–108.

821.—**Easton, A. M.** *Meligethes nanus* Erichson (Col., Nitidulidae) reaffirmed as a British species. Ent. mon. Mag., London **86** 1950 pp. 44–46, 6 figs.

822.—**Easton, A. M.** Some amendments of nomenclature in the genus *Meligethes* Stephens (Col., Nitidulidae). Ent. mon. Mag., London **86** 1950 pp. 308–309.

823.—**Ebeling, W.** Subtropical entomology. San Francisco, Cal., Lithotype Process Co. 1950 ix and 747 pp. 570 figs.

824.—[**Edelman, N. M.**] Certain laws governing the day and night rhythm of the respiration of insects. [In Russian.] Zool. Zh., Moscow **29** 1950 pp. 427–434, 8 figs.

825.—**Edmunds, jr., G. F.** New records of the mayfly genus *Baetodes*, with notes on the genus. Ent. News, Lancaster, Pa. **61** 1950 p. 203. [Ephem.]

826.—**Edmunds, jr., G. F.** Notes on neotropical Ephemeroptera. I. New and little known Leptophlebiidae. Rev. Ent., Rio de Janeiro **21** 1950 pp. 551–554, 4 figs.

827.—**Edwards, A. B.** A study of the Tasmanian Psocoptera with descriptions of new species. Pap. roy. Soc. Tasmania, Hobart **1949** 1950 pp. 93–134, 117 figs.

828.—**Edwards, E. E. & Evans, J. R.** Observations on the biology of *Corymbites cupreus* F. (Coleoptera, Elateridae). Ann. appl. Biol., London **37** 1950 pp. 249–259.

829.—**Edwards, G. A. & Nutting, W. L.** The influence of temperature upon the respiration and heart activity of *Thermobia* and *Grylloblatta*. Psyche, Cambridge, Mass. **57** 1950 pp. 33–44, 4 figs. [Thysanura, Orth.]

830.—**Edwards, J. G.** Amphizoidae (Coleoptera) of the world. Wasmann J. Biol., San Francisco **8** 1950 pp. 303–332, 4 pls.

- 831.—Eggers, H. Borkenkäfer (Ipidae, Col.) aus Südamerika. IX. 5 neue Chilenen. Zool. Anz., Leipzig **139** 1942 pp. 13–17.
- 832.—Eichler, W. Federlingseier an und in Vogelfedern. Columba [sine loco] **2** [? 1950] Heft 1, repr. 1 p. 6 figs. [Malloph.]
- 833.—Eichler, W. Notulae mallophagologicae XIII. Neue Gonioidae. Doriania, Genoa **1** 1950 no. 9, 8 pp. 12 figs.
- 835.—Eichler, W. Mallophagen-Synopsis. XX. Genus *Pseudoleipeurus*. Rev. Ent., Rio de Janeiro **21** 1950 pp. 275–279, 1 fig.
- 836.—Eichler, W. Ueber die endoparasitische Lebensweise der Kormoran-Federlinge. Riv. Parassit., Rome **11** 1950 pp. 103–108, 4 figs. [Malloph.]
- 837.—Eichler, W. Erste Ergänzung zu Kélers "Übersicht über die gesamte Literatur der Mallophagen". Z. angew. Ent., Berlin **31** 1950 pp. 617–635.
- 838.—Eichler, W. Die Bedeutung von H. Fahrenholz † für die Läuseforschung. Z. hyg. Zool., Berlin **38** 1950 pp. 326–337, 3 figs. [Malloph., Anopl.]
- 839.—Eichler, W. Morphologische und biologische Merkmale mittel-europäischer Dasselfliegen und ihrer Larven. III. Z. Parasitenk., Berlin **12** 1941 pp. 95–106. [Dipt.]
- 840.—Eichler, W. Notulae mallophagologicae. IX. *Oedicnemiceps* nov. gen. und andere interessante Federlinge von bemerkenswerten Wirten. Zool. Anz., Leipzig **141** 1943 pp. 57–61.
- 841.—Eichler, W. *Tetraphthalmus vigua* nov. spec., ein Federling aus der Mundhöhle von *Phalacrocorax olivaceus*. Zool. Anz., Leipzig **141** 1943 pp. 133–136, 2 figs. [Malloph.]
- 842.—Eichler, W. Ektoparasiten von Zoo-tieren. I. Mallophagen vom Nandu. Zool. Garten, Leipzig (N.F.) **17** 1950 pp. 258–261, 5 figs.
- 843.—Eichler, W. & Müller, B. Die Phasenkontrastmikroskopie in der parasitologischen Diagnostik. Exp. Vet.-med., Berlin **2** [1950] pp. 103–110.
- 844.—Eichler, W. & Schrödter, H. Temperaturmessungen im *Anopheles*-Larven-Biotop (Oberflächenschicht ruhiger Kleingewässer). Arch. Hydrobiol., Stuttgart **43** 1950 pp. 295–303, 2 figs. [Dipt.]
- 845.—Eidmann, H. Grundsätzliches über die Ursachen der Verbreitung und Populationsdichte der Insekten. Verh. dtsch. Zool. Kiel **1948**, 1949 pp. 359–365, 3 figs.
- 846.—Eidmann, H. Zur Kenntnis der *Crematogaster impressa* Em. (Hym. Formicidae) und ihrer Gäste. Zool. Anz., Leipzig **136** 1941 pp. 207–220, 5 figs.
- 847.—Eidmann, H. Zur Kenntnis der Ökologie von *Azteca muelleri* Em. (Hym. Formicidae), ein Beitrag zum Problem der Myrmecophyten. Zool. Jb., Jena (Syst.) **77** (1944) 1945 pp. 1–48, 4 pls. 9 figs.
- 848.—Ekblom, T. Ueber den Flügelpolymorphismus bei *Gerris odontogaster* Zett. Notul. ent., Helsinki **30** 1950 pp. 41–49, 1 fig. [Hem.]
- 849.—Ekström, M. Lepidopterologiska notiser från Gotland. [In Swedish with German summary.] Opusc. ent., Lund **15** 1950 pp. 139–142.
- 850.—Ellis, L. L. The status of *Plea striola* and *harnedi* (Hemiptera, Pleidae). Proc. ent. Soc. Washington **52** 1950 pp. 104–105, 1 fig.
- 851.—Ellis, P. E. Marching in locust hoppers of the solitary phase. Nature, London **166** 1950 p. 151, 1 graph. [Orth.]
- 852.—El-Sawaf, S. K. The life-history of the greater wax-moth (*Galleria mellonella* L.) in Egypt, with special reference to the morphology of the mature larva (Lepidoptera: Pyralidae). Bull. Soc. Fouad ler Ent., Cairo **34** 1950 pp. 247–297, 5 pls.
- 853.—Embry, B. & Youden, G. H. The butterflies and moths (Macro-Lepidoptera and Pyrales) found in the Dover and Deal district of Kent. Dover, 1949 ix & 61 pp.
- 854.—Emden, F. I. van. The identity of the species of *Hypoderma* (Dipt.) attacking goat. Bull. ent. Res., London **41** 1950 pp. 223–226, 3 figs.

- 855.—**Emden**, F. I. van. Dip-
terous parasites of Coleoptera. Ent.
mon. Mag., London **86** 1950 pp.
182–206.
- 856.—**Emden**, F. I. van. Eggs,
egg-laying habits and larvae of short-
nosed weevils. Proc. 8th int. Congr.
Ent. Stockholm 1948, 1950 pp. 365–
372, 15 figs. [Col.]
- 857.—**Emden**, F. van. *Mormo-
tomyia hirsuta* Austen (Diptera) and
its systematic position. Proc. R.
ent. Soc. London (B) **19** 1950 pp.
121–128, 15 figs.
- 858.—**Emerson**, A. E. Five new
genera of termites from South
America and Madagascar (Isoptera,
Rhinotermitidae, Termitidae). Amer.
Mus. Novit., New York no. 1444
1950 15 pp. 6 figs.
- 859.—**Emerson**, K. C. The genus
Lagopoecus (Philopteridae: Mallo-
phaga) in North America. J. Kansas
ent. Soc., Manhattan **23** 1950 pp.
97–101, 15 figs.
- 860.—**Emerson**, K. C. New species
of *Goniodes*. J. Kansas ent. Soc.,
Manhattan **23** 1950 pp. 120–126,
2 pls. [Malloph.]
- 861.—[**Emme**, A. M.] [Variation
and inheritance of susceptibility to
cold of diapause eggs of the mulberry
silkworm. In Russian.] C.R. Acad.
Sci. URSS, Moscow (N.S.) **75** 1950
pp. 119–122. [Lep.]
- 862.—**English**, K. M. I. Notes on
the morphology and biology of
Anabarrhynchus fasciatus Macq. and
other Australian Therevidae (Di-
ptera, Therevidae). Proc. Linn. Soc.
New South Wales, Sydney **75** 1950
pp. 345–359, 47 figs.
- 863.—**Enser**, K. Histologische
Untersuchung über den Saugstiel
von *Aspidiotus perniciosus* Comst.
(San José-Schildlaus). PflSch. Ber.,
Vienna **5** 1950 pp. 204–226, 12 figs.
[Hem.]
- 864.—**Enslin**, E. On the Chrysidi-
didae (Hymenoptera) of Cyprus. Ann.
Mag. nat. Hist., London (12) **3** 1950
pp. 656–671, 4 figs.
- 865.—**Erdös**, J. De vita insec-
torum in caulinibus viventium. [In
Magyar with Latin summary.] Folia
ent. hung., Budapest (N.S.) **3** 1949
pp. 22–33, 2 figs.
- 866.—**Erdös**, J. *Derostenus arc-
ticus* (Hymen., Chalc.) species nova e
Rossia arctica. Folia ent. hung.,
Budapest (N.S.) **3** 1950 pp. 55–57,
1 fig.
- 867.—**Erlandsson**, S. *Bombus
soroeensis* Fabr. (Hym.) en mindra
känd art i vår fauna. Ent. Tidskr.,
Stockholm **71** 1950 pp. 20–26, 2 figs.
- 868.—**Erlandsson**, S. Släktet
Eunenes Latr. (Hym.) och dess i
Sverige förekommande arter. Ent.
Tidskr., Stockholm **71** 1950 pp.
235–242, 2 maps.
- 869.—**Ermisch**, K. Die Gattungen
der Mordelliden der Welt. Ent. Bl.,
Krefeld **45–46** (1949–1950) 1950 pp.
34–92. [Col.]
- 870.—**Esaki**, T. A zoogeographical
consideration of the insect fauna in
the Pacific Islands. Proc. 8th int.
Congr. Ent. Stockholm 1948, 1950
pp. 373–379.
- 871.—**Esaki**, T. & **Ishihara**, T.
Hemiptera of Shansi, North China.
Hemiptera I. Homoptera. Mushi,
Fukuoka **21** 1950 pp. 39–48, 3 pls.
1 fig.
- 872.—**Esaki**, T. & **Ishihara**, T.
Some new species of Pentatomidae
from Japan (Hemiptera). Trans.
Shikoku ent. Soc. **1** 1950 pp. 54–58,
3 figs.
- 873.—**Escobar Duarte**, F. Insetos
holometabólicos. Agronomia, Rio de
Janeiro **9** 1950 pp. 275–289, 351–357.
- 874.—**Español Coll**, F. Los repre-
sentantes catalanes de la familia
Rhipiphoridae (Col.). An. Esc. Peri-
tos agric., Barcelona **2** 1942 pp. 335–
346, 2 figs.
- 875.—**Español Coll**, F. Los *Crypti-
cus* s. str. de la península ibérica y
del norte de Africa (Col. Tenebrio-
nidae). Eos, Madrid **26** 1950 pp.
115–156, 17 figs.
- 876.—**Español Coll**, F. Datos para
el conocimiento de los tenebriónidos
del Mediterráneo occidental. VI–
VIII. Graellsia, Madrid **7** 1949 pp.
1–7, 3 figs., pp. 43–48.

- 877.—Español Coll, F. Coleópteros no autóctonos observados en Barcelona y sus alrededores inmediatos. Graellsia, Madrid 7 1949 pp. 27–41, 1 fig.
- 878.—Español Coll, F. Contribución al estudio de los *Crypticus* paleárticos (Col.Tenebrionidae). Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 124–129, 5 figs.
- 879.—Español Coll, F. Assaig monogràfic del subgènere *Dendarus* s. str. (Col. Tenebrionidae). Treb. Mus. Ciènc. nat. Barcelona 11 1937 no. 12, 89 pp. 13 pls.
- 880.—Español Coll, F. Revisión del género *Micrositus* (Col. Tenebrionidae). Trab. Mus. Cienc. nat. Barcelona (N.S. Zool.) 1 1947 no. 1, 60 pp. 26 figs.
- 881.—Esquivel, L. Primer suplemento a la lista de himenópteros parásitos y predadores de los insectos de la República Argentina. Rev. Soc. ent. argent., Buenos Aires 14 1950 pp. 270–296.
- 882.—Essig, E. O. A new genus and species of Aphidiidae on aloe (Homoptera). Pan-Pacif. Ent., San Francisco 26 1950 pp. 22–24, 2 figs.
- 883.—Evans, F. C. & Freeman, R. B. On the relationship of some mammal fleas to their hosts. Ann. ent. Soc. Amer., Columbus 43 1950 pp. 320–333. [Siphonapt.]
- 884.—Evans, H. E. The genus *Allaporus* Banks (Hymenoptera, Pompilidae): notes and descriptions. Ent. News, Lancaster, Pa. 61 1950 pp. 1–5.
- 885.—Evans, H. E. New species of *Pomphilinus* (Hymenoptera, Pompilidae). J. Kansas ent. Soc., Manhattan 23 1950 pp. 84–89, 4 figs.
- 886.—Evans, H. E. A taxonomic study of the Nearctic spider wasps belonging to the tribe Pompilini (Hymenoptera : Pompilidae). Part I. Trans. Amer. ent. Soc., Philadelphia 75 1950 pp. 133–270, 7 pls.
- Evans, J. R. see Edwards & Evans.
- 887.—Evans, J. W. Contribution à l'étude de l'Air. Hémiptères Lygaeidae. Mém. Inst. franç. Afr. noire, Paris no. 10 1950 pp. 321–322.
- 888.—Evans, W. H. The care of larvae in diapause. Lep. News, New Haven 4 1950 p. 70.
- 889.—Evans, W. H. Life history notes on *Incita aurantiaca* Hy. Edw. (Lepidoptera : Phalaenidae). Pan-Pacif. Ent., San Francisco 26 1950 p. 21.
- 890.—Evers, A. M. J. Die *Sphingopalpus*-Arten von tropisch Afrika (Col. Malach.). Rev. Zool. Bot. afr., Brussels 43 1950 pp. 318–328.
- 891.—Ewer, D. W. & Bursell, E. A note on the classification of elementary behaviour patterns. Behaviour, Leiden 3 1950 pp. 40–47.
- 892.—Fabián, G. Phänotypische Untersuchungen an einer Sterilitäts-mutante ("bordo-steril") von *Drosophila melanogaster*. Arch. Klaus-Stift. VererbForsch. Zürich 23 (1948) 1949 pp. 512–517, 2 figs. [Dipt.]
- 893.—Fagel, G. Contribution à la connaissance des Staphylinidae. I, II. Bull. Inst. Sci. nat. Belg., Brussels 26 1950 no. 27 12 pp. ; no. 59 12 pp., 6 figs.
- 894.—Fagel, G. Trogositidae (Coleoptera Clavicornia). Explor. Parc nat. Albert, Miss. de Witte (1933–1935). Brussels 1950 fasc. 70 p. 7.
- 895.—Fahlander, K. Några för Sverige nya grävsteklar (Hym. Acul.). [In Swedish with German summary.] Opusc. ent., Lund 15 1950 pp. 125–126.
- 896.—Fain, A. Simulies nouvelles du Ruanda-Urundi. Rev. Zool. Bot. afr., Brussels 43 1950 pp. 101–123, 29 figs. [Dipt.]
- 897.—Fain, A. Simulies d'élevage et de capture du Ruanda-Urundi. Rev. Zool. Bot. afr., Brussels 43 1950 pp. 228–239. [Dipt.]
- 898.—Fairchild, G. B. & Brues, C. T. Guide to the insects of Connecticut. Part VI. The Diptera or true flies of Connecticut. Fourth fascicle. Family Tabanidae. Family Phoridae. Bull. Connecticut geol. nat. Hist. Surv., Hartford no. 75 1950 vi+92 pp. 1 pl. 8 figs.

899.—Fairchild, G. B. & Trapido, H. The West Indian species of *Phlebotomus* (Dipt. Psychodidae). Ann. ent. Soc. Amer., Columbus **43** 1950 pp. 405–417, 2 pls.

Fairchild, G. B. see Hertig & Fairchild.

900.—Fassati, M. Un traité sur l'espèce *Bembidion dilutipenne* Solsky. Acta Soc. ent. Čsl., Prague **47** 1950 pp. 7–13, 1 fig. 1 map. [Col.]

901.—Fassati, M. Un traité sur l'espèce *Bembidion poppii* Net. Acta Soc. ent. Čsl., Prague **47** 1950 pp. 119–127, 5 figs. [Col.]

902.—Fattig, P. W. The Ichneumonidae or parasitic Hymenoptera of Georgia. Emory Univ. Mus. Bull., Georgia no. 9 1950 78 pp.

Feijão see Portela Feijão.

903.—Feijó Colaço, A. T. Os métodos de criação de *Phlebotomus*. An. Inst. Med. trop., Lisbon **7** 1950 pp. 427–453, 15 figs. [Dipt.]

Fellton, H. L. see Barnes, Fellton & Wilson.

Fender, D. see McKey-Fender.

904.—Fennah, R. G. A generic revision of Achilidae (Homoptera; Fulgoroidea) with descriptions of new species. Bull. Brit. Mus. (Nat. Hist.), London Ent. **1** 1950 pp. 1–170, 119 figs.

905.—Fernández, J. M. La *Spheniscomyia filiola* Loew y su mimetismo. Graellsia, Madrid **7** 1949 pp. 19–21, 3 figs. [Dipt.]

906.—Fernández, J. M. Los Phoridae. Notas biológicas y sistemáticas. Graellsia, Madrid **7** 1949 pp. 93–98, 9 figs. [Dipt.]

907.—Fernando, H. E. The anatomy and histology of the alimentary canal of a Myrmeleonid larva. Ceylon J. Sci., Colombo (B Zool.) **24** 1950 pp. 27–45, 19 figs. [Neur.]

908.—Fernando, W. Notes on the alimentary canal and Malpighian tubules of the firefly (*Luciola mauretanica*). Ceylon J. Sci., Colombo (B Zool.) **24** 1950 pp. 49–59, 2 pls. 14 figs. [Col.]

Feron, M. see Grison, Feron & Sacantanis.

909.—Ferreira d'Almeida, R. Ligeiras notas sobre Ithomiidae da América do Sul (Lep., Ithomiidae). An. Inst. Biol., Mexico **20** (1949) 1950 pp. 393–397, 3 figs.

910.—Ferreira d'Almeida, R. Nota retificativa e adicional sobre alguns tipos de gêneros e sobre a nomenclatura de alguns grupos superiores publicados por nós em 1942, 1943 e 1944. Rev. Ent., Rio de Janeiro **21** 1950 pp. 223–224. [Lep.]

911.—Ferrel, C. M., Twining, H. & Herkenham, N. B. Food habits of the ring-necked pheasant (*Phasianus colchicus*) in the Sacramento Valley, California. Calif. Fish Game, Sacramento **35** 1949 pp. 51–69.

912.—Ferrière, C. Notes sur les *Eurytoma* (Hym. Chalcidoidea) I. Les types de Thomson et de Mayr. Mitt. schweiz. ent. Ges., Berne **23** 1950 pp. 377–410, 6 figs.

913.—Ferris, G. F. Atlas of the scale insects of North America. Series V. The Pseudococcidae (Part I). Stanford Univ. Press, California; London, G. Cumberledge, Oxford Univ. Press 1950 vii + 278 pp. 108 figs. [Hem.]

914.—Ferris, G. F. Report upon scale insects collected in China (Homoptera : Coccoidea). Parts I, II. Microentomology, Stanford Univ. **15** 1950 pp. 1–34, 20 figs., 70–97, 18 figs.

Ferris, G. F. see Demerec, M.

915.—Feytaud, J. Les Coléoptères du pin maritime. Ann. Ecole nat. Eaux & Forêts, Nancy **12** 1950 repr. 96 pp. 47 figs.

916.—Feytaud, J. A propos des *Reticuliternes* de France. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 380–381. [Isopt.]

917.—Fiedler, C. Neue Arten der Genera *Acalles* und *Rhysomatus* aus Südamerika (Col. Curc. Cryptorhynch.). Zool. Anz., Leipzig **140** 1942 pp. 203–219.

918.—Fiedler, C. Die südamerikanischen Arten der Gattung *Gasterocercus* Lap. et Brullé (Col. Curcul. Cryptorhynchidae). Zool. Anz., Leipzig **140** 1942 pp. 221–247.

- 919.—Fiedler, C. Neue südamerikanische Cryptorhynchiden (Col. Curcul.). Zool. Anz., Leipzig **144** 1943 pp. 1–20.
- 920.—Fiedler, C. Neue südamerikanische Arten der Gattung *Cophes* Champ. (Col. Curc. Cryptorhynchid.). Zool. Anz., Leipzig **145** 1950 pp. 155–170.
- 921.—Fiedler, C. Neue Arten der Gattungen *Siron* und *Staseas* (Col. Curc. Cryptorhynch.). Zool. Anz., Leipzig **145** 1950 pp. 230–246.
- 922.—Fiedler, H. G. Studien zur Biologie und Bekämpfung der Kaffeewanzen (*Antestia lineaticollis* Stål und *A. faceta* Germ.) in Ostafrika. Z. angew. Ent., Berlin **31** 1950 pp. 473–499, 3 figs. [Hem.]
- 923.—Field, W. D. The International Commission on Zoological Nomenclature and the correct name for the North American monarch butterfly (Lepidoptera, Danaidae). Proc. ent. Soc. Washington **52** 1950 pp. 234–236. [Lep.]
- 924.—Field, W. D. Moths of the genus *Cincia* and three new and closely related genera. Proc. U.S. nat. Mus., Washington, D.C. **100** 1950 no. 3264 pp. 311–326, 4 pls. [Lep.]
- 925.—Finlayson, L. H. Host preference of *Cephalonomia waterstoni* Gahan, a Bethylid parasitoid of *Laemophloeus* species. Behaviour, Leiden **2** 1950 pp. 275–316, 10 figs. [Hym., Col.]
- 926.—Finlayson, L. H. The biology of *Cephalonomia waterstoni* Gahan (Hym., Bethylidae), a parasite of *Laemophloeus* (Col., Cucujidae). Bull. ent. Res., London **41** 1950 pp. 79–97.
- Finlayson, T. U. see Smith & Finlayson.
- 927.—Finney, G. L. Mass-culturing *Chrysopa californica* to obtain eggs for field distribution. J. econ. Ent., Menasha **43** 1950 pp. 97–100. [Neur.]
- 928.—Fischer, F. Einige interessante Formen von *Argynnis selene* Schiff. aus dem Riesengebirge. Wien. ent. Rdsch., Vienna **2** 1950 p. 22, 4 figs. [Lep.]
- 929.—Fischer, H. Zehn neue Libellen für Schwaben. Ber. naturf. Ges. Augsburg **3** 1950 pp. 95–96. [Odon.]
- 930.—Fischer, R. L. Kansas bees of the genus *Agapostemon* Guerin (Hymenoptera, Halictidae). J. Kansas ent. Soc., Manhattan **23** 1950 pp. 76–78.
- 931.—Fisher, R. S. & Morrison, F. O. Methods of rearing and sexing (*Musca domestica* L.). Ann. Rep. ent. Soc. Ontario, Toronto **80** (1949) 1950 pp. 41–45, 3 figs. [Dipt.]
- 932.—Fisher, W. S. A revision of the North American species of beetles belonging to the family Bostrichidae. Misc. Publ. U.S. Dep. Agric., Washington, D.C. no. 698 1950 157 pp. [Col.]
- 933.—Fiszer, J. Action de l'ion Mg sur l'automatisme du vaisseau dorsal de *Gryllus domesticus* L. C.R. Soc. Biol., Paris **144** 1950 pp. 812–814, 1 chart. [Orth.]
- 934.—Fiszer, J. Actions antagonistes du magnésium et des ions alcalins sur l'automatisme du vaisseau dorsal de *Gryllus domesticus* L. C.R. Soc. Biol., Paris **144** 1950 pp. 815–817, 2 figs. [Orth.]
- Fiszer, J. see Dreux & Fiszer.
- 935.—Flanders, S. E. Culture of entomophagous insects. Canad. Ent., Guelph **81** (1949) 1950 pp. 257–274.
- 936.—Flanders, S. E. Regulation of ovulation and egg disposal in the parasitic Hymenoptera. Canad. Ent., Guelph **82** 1950 pp. 134–140.
- 937.—Flanders, S. E. A host-parasite community to demonstrate balance. Ecology, Durham, N.C. **29** 1948 p. 123.
- 938.—Fleming, H. The Euchromiidae (moths) of Kartabo, British Guiana, and Caripito, Venezuela. Zoologica, New York **35** 1950 pp. 209–216. [Lep.]
- 939.—Fleschner, C. A. Studies on searching capacity of the larvae of three predators of the Citrus red mite. Hilgardia, Berkeley **20** 1950 pp. 233–265, 15 figs.

940.—Fletcher, D. S. New African species of Geometridae. Rev. Zool. Bot. afr., Brussels **43** 1950 pp. 345-348, 3 figs. [Lep.]

Fletcher, D. S. *see* Bradley, Collins & Fletcher.

941.—Floch, H. & Abonnenc, E. Ceratopogonides nouveaux du Venezuela. Bol. Ent. venezol., Caracas **8** (1949) 1950 pp. 69-75, 2 figs. [Dipt.]

942.—Floch, H. & Abonnenc, E. Phlébotomes du Vénézuela. Bol. Ent. venezol., Caracas **8** (1949) 1950 pp. 77-101, 12 figs. [Dipt.]

943.—Floch, H. & Abonnenc, E. Phlébotomes du Vénézuela. Publ. Inst. Pasteur Guyane Terr. Inini, Cayenne no. 166 1948 3 pp. 6 figs.; no. 208 1950 4 pp. 2 figs. [Dipt.]

944.—Floch, H. & Abonnenc, E. Sur une variété de *Phlebotomus roubaudi* Newstead, 1913. *P. roubaudi* var. *fourtoni* nov. var. Publ. Inst. Pasteur Guyane Terr. Inini, Cayenne no. 169 1948 4 pp. 10 figs. [Dipt.]

945.—Floch, H. & Abonnenc, E. Les *Culicoides* de la Guadeloupe. Description de *Culicoides guadeloupensis* n. sp. Publ. Inst. Pasteur Guyane Terr. Inini, Cayenne no. 203 1950 5 pp., 1 fig.

946.—Floch, H. & Chassignet, R. Phlébotomes de la Guyane française (XXIV). Description de deux femelles nouvelles. Publ. Inst. Pasteur Guyane, Cayenne no. 170 1948 pp. 1-6, 2 figs. [Dipt.]

Florkin, G. *see* Grégoire & Florkin.

947.—Florkin, M., Duchâteau, G. & Leclercq, J. Sur les constituants inorganiques du plasma sanguin des insectes. Arch. int. Physiol., Paris & Liège **57** 1949 pp. 209-210.

948.—Florkin, M., Lozet, F. & Sarlet, H. Sur la digestion de la cire d'abeille par la larve de *Galleria mellonella* Linn. et sur l'utilisation de la cire par une bactérie isolée à partir du contenu intestinal de cette larve. Arch. int. Physiol., Paris & Liège **57** 1949 pp. 71-88, 3 figs. [Lep.]

Florkin, M. *see* Grégoire & Florkin.

949.—Fluiter, H. J. de. *Hirsutella fusiformis* Speare als parasiet van de

grauwe dennensnuitkever, *Brachyderes incanus* L. Ent. Ber., Amsterdam **13** 1950 pp. 113-115. [Col.]

950.—Fluiter, H. J. de. The effect of length of day and temperature upon the occurrence of the sexual forms in *Aphis fabae* Scop., the black bean aphid. [In Dutch with English summary.] Tijdschr. PlZiekt., Wageningen **56** 1950 pp. 265-285, 5 figs. [Hem.]

Fluke, jr., C. L. *see* Hull & Fluke.

951.—Focarile, A. 1º contributo alla conoscenza dei Bathyscini paleartici (Coleoptera : Catopidae). Due nuove specie di *Boldoria* s.l. e note su qualche specie del subgenere *Pseudoboldoria* Ghid. Boll. Soc. ent. ital., Genoa **80** 1950 pp. 22-27, 8 figs.

952.—Focarile, A. 3º contributo alla conoscenza dei Trechini paleartici (Coleoptera : Carabidae). Boll. Soc. ent. ital., Genoa **80** 1950 pp. 67-74, 5 figs. 2 maps.

953.—Focarile, A. 2º contributo alla conoscenza dei Trechini paleartici (Coleoptera : Carabidae). 1. *Trechus* alticoli delle Alpi e Prealpi Orobie (Gruppo del *Tr. pertyi* Heer). Mem. Soc. ent. ital., Genova **29** 1950 pp. 52-67.

954.—Foltin, H. Eine Lokalrasse der *Oreopsyches muscella* F. Z. wien. ent. Ges., Vienna **3** 1950 pp. 15-16, 1 pl. [Lep.]

955.—Fonseca, J. P. da. Contribuição para o conhecimento dos Membracídeos neotrópicos. (V). Arq. Inst. biol., São Paulo **19** (1949-50) 1950 pp. 111-116, 1 pl. [Hem.]

956.—Forattini, O. P. & Pinto Serra, O. Contribuição ao conhecimento da morfologia e biologia de *Pyrrhocodrus militaris* Stål 1866 (Hemiptera, Harpactorinae). Dusenia, Curitiba **1** 1950 pp. 229-236, 1 pl. 1 fig.

957.—Forsslund, K.-H. Ueber die Einsammlungsmethodik bei Untersuchungen der Bodenfauna. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 770-772.

958.—Fourès, H. Deux *Aphaenops* nouveaux des Pyrénées françaises. Publ. Mus. Hist. nat., Paris no. 10 1948 pp. 83-87, 3 figs. [Col.]

959.—Fox, I. & Kohler, C. E. Distribution and relative abundance of the species of biting midges or *Culicoides* in eastern Puerto Rico, as shown by light traps. P.R.J. publ. Hlth, San Juan, P.R. **25** 1950 pp. 342–348, 1 map. [Dipt.]

960.—Fraenkel, G., Blewett, M. & Coles, M. The nutrition of the meal-worm, *Tenebrio molitor* L. (Tenebrionidae, Coleoptera). Physiol. Zool., Chicago **23** 1950 pp. 92–108, 9 figs.

Fraenkel, G. see Pant & Fraenkel.

961.—Franciscolo, M. La fauna della Tann-a do Balou, No. 11 Li. e descrizione della larva di *Bathyosciola pumilio* Reitt. Ann. Mus. Stor. nat., Genova **64** 1950 pp. 111–129, 1 fig.

962.—Franciscolo, M. Diagnosi preliminari di nuovi Mordellidi (Coleoptera-Heteromera). Ann. Mus. Stor. nat., Genova **64** 1950 p. 130.

963.—Franciscolo, M. 17^o contributo allo conoscenza dei Mordellidae (Col. Heteromera). Atti Soc. ital. Sci. nat., Milan **89** 1950 pp. 17–20, 2 figs.

964.—Franciscolo, M. Un nuovo Mordellino di Birmania. Doriania, Genoa **1** 1949 no. 1 4 pp. 24 figs. [Col.]

965.—Franciscolo, M. *Ermischella papuana* n. gen. n. sp. di Mordellide della Nuova Guinea e diagnosi preliminari di tre nuovi generi africani. Doriania, Genoa **1** 1950 no. 5, 8 pp. 11 figs. [Col.]

966.—Francke-Grosmann, H. Ueber den Kopulationsapparat des Riesenbastkäfers *Dendroctonus micans* Kug. Verh. dtsch. Zool. Kiel 1948, 1949 pp. 219–225, 6 figs. [Col.]

967.—Franclemont, J. G. Notes on some genera and species of eastern moths with descriptions of new species (Lepidoptera, Phalaenidae). Bull. Brooklyn ent. Soc., Lancaster, Pa. **45** 1950 pp. 144–155, 1 pl. 2 figs.

968.—Franclemont, J. G. On the types of two genera in the Lepidoptera (Arctiidae and Drepanidae). Entomologist, London **83** 1950 pp. 199–200.

969.—Franclemont, J. G. The Linnaean subgeneric names of *Phalaena* (Lepidoptera, Heterocera). J. New York ent. Soc. **58** 1950 pp. 41–53.

970.—Franclemont, J. G. A new moth from Patagonia (Lepidoptera, Phalaenidae). Proc. ent. Soc. Washington **52** 1950 pp. 40–41, 1 fig.

Franco, A. C. see Schiavi & Franco.

Frank, M. B. see Park & Frank.

971.—Franz, E. Die Sprache der Bienen. Natur u. Volk, Frankfurt a. M. **80** 1950 pp. 257–263, 6 figs. [Hym.]

972.—Franz, H. Zur Kenntnis der Synonymie und Verbreitung von *Bibloporus minutus* Raffr. (Coleopt., Pselaphidae). Ent. Tidskr., Stockholm **71** 1950 pp. 168–170.

973.—Franz, H. Prä- und interglaziale Relikte in der Bodenfauna der Nordostalpen. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 382–400, 9 maps. [Col.]

974.—Franz, H. Die Artenzusammensetzung ostalpiner und pannischer Bodentiergemeinschaften in ihrer Abhängigkeit vom Standort. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 401–407.

975.—Franz, H. Das Studium geographischer Rassen und seine Bedeutung für die Lösung tiergeographischer und stammesgeschichtlicher Probleme. Z. wien. ent. Ges., Vienna **35** 1950 pp. 3–15.

976.—Franz, H. Untersuchungen über die Kleintierwelt ostalpiner Böden II. Die Collembolen. Zool. Jb., Jena (Syst.) **77** 1945 pp. 81–162.

977.—Franz, H. & Palmén, E. Beitrag zur Kenntnis der UnterGattung *Goniomena* Kirby der Gattung *Phytodecta* (Col., Chrysomelidae). Ann. ent. fenn., Helsinki **16** pp. 14–18, 2 figs.

978.—Fraser, F. C. Report on a collection of Odonata from Liberia. Bull. Inst. frang. Afr. noire, Dakar **12** 1950 pp. 611–624, 4 figs.

979.—Fraser, F. C. A revision of the Chlorocyphidae, addenda with key to the *Platocypha* and *Chlor-*

cypha and descriptions of new species. Bull. Inst. Sci. nat. Belg., Brussels **26** 1950 no. 18, 22 pp., 6 figs. [Odon.]

980.—Fraser, F. C. The nymphal stages of *Coenagrion scitulum* (Rambur), a recent addition to the British fauna (Odonata). Ent. mon. Mag., London **86** 1950 pp. 97–102, 4 figs.

981.—Fraser, F. C. A note on the correct origin of the name *Libellula* employed in Odonata. Ent. mon. Mag., London **86** 1950 pp. 311–312, 3 figs.

982.—Fraser, F. C. The entomological fauna of the New Forest. I. Order Odonata Fabr. J. Soc. Brit. Ent., Bournemouth **3** 1950 pp. 138–148.

983.—Fraser, F. C. Contribution à l'étude de l'Air. Odonata and Neuroptera. Mém. Inst. franç. Afr. noire, Paris no. 10 1950 pp. 108–126, 10 figs.

984.—Fraser, F. C. *Atoconeura extraordinata*, a new species of Libellulidae from Uganda. Proc. R. ent. Soc. London (B) **19** 1950 pp. 56–57, 1 fig.

985.—Fraser, F. C. The Odonata of Mauritius, suborder Anisoptera, and the description of a new species of Zygoptera. Proc. R. ent. Soc. London (B) **19** 1950 pp. 70–77, 1 fig.

986.—Fraser, M. G. Notes on the biology of *Saperda scalaris* L. (Col., Cerambycidae). Ent. mon. Mag., London **86** 1950 pp. 33–36, 4 figs.

987.—Freeman, H. A. The distribution and flower preferences of the Theclinae of Texas (Lepidoptera, Rhopalocera, Lycaenidae). Field & Lab., Dallas **18** 1950 pp. 65–73.

988.—Freeman, H. A. Notes on *Megathymus*, with description of a new species (Lepidoptera, Rhopalocera, Megathymidae). Field & Lab., Dallas **18** 1950 pp. 144–146.

989.—Freeman, P. The external genitalia of male Simuliidae. Ann. trop. Med. Parasit., Liverpool **44** 1950 pp. 146–152, 9 figs. [Dipt.]

990.—Freeman, P. Notes on one African and two southern Palaearctic species of *Simulium* with new

synonymy. Bull. Soc. Path. exot., Paris **43** 1950 pp. 226–234, 9 figs. [Dipt.]

991.—Freeman, P. A subapterous species of *Tipula* (Diptera) from East Africa. Entomologist, London **83** 1950 pp. 61–63, 3 figs.

992.—Freeman, P. A species of Chironomid from the Sudan suspected of causing asthma. Proc. R. ent. Soc. London (B) **19** 1950 pp. 58–59, 1 fig. [Dipt.]

Freeman, P. see Coe, Freeman & Mattingly.

993.—Freeman, R. B. A check list of the British Siphonaptera, with comments on the nomenclature. Ent. mon. Mag., London **86** 1950 pp. 14–22.

Freeman, R. B. see Evans & Freeman.

994.—Freire de Andrade, N. Espécies de Portugal. Gén. *Solierella* Spinola (Hymen. Sphecidae). Broteria, Lisbon (Ci. nat.) **46** 1950 pp. 5–11, 1 fig. 1 map.

995.—Freude, H. Liste der von P. Cornelius Vogl in Venezuela gefangenen Käfer: I. Hispidae und Cassididae. Bol. Ent. venezol., Caracas **8** (1949) 1950 pp. 125–128.

996.—Freude, H. Zur Frage *Cylindronotus (Stenomax) lanipes* (L.), *aeneus* (Scop.), *incurvus* (Küst.) (Col. Tenebrionidae). Mitt. münchen. ent. Ges., Munich **40** 1950 pp. 237–242, 4 figs.

997.—Frey, G. v. Zwei neue *Onthophagus*-Arten aus der Alten Welt. Mitt. münchen. ent. Ges., Munich **40** 1950 pp. 300–303, 6 figs. [Col.]

998.—Frey, R. Neue paläarktische *Rhamphomyia*-Arten nebst Bestimmungstabelle der *Rhamphomyia*-Subgenera. Notul. ent., Helsinki **29** (1949) 1950 pp. 91–119; **30** 1950 pp. 78–80. [Dipt.]

999.—Frey, R. Dipterfaunan vid Tana älvs i Utsjoki sommaren 1949. Mit einem Anhang: Synonymische Bemerkungen und Beschreibungen einiger neuen Diptera brachycera aus Utsjoki in Finnisch-Lappland. [With English summary.] Notul. ent., Helsinki **30** 1950 pp. 5–18, 1 fig.

- 1000.—Frings, H. & Hamrum, C. L. The contact chemoreceptors of adult yellow fever mosquitoes, *Aedes aegypti*. J. New York ent. Soc. **58** 1950 pp. 133–142, 1 pl. [Dipt.]
- 1001.—Frisch, K. v. Die Sonne als Kompass im Leben der Bienen. Experientia, Basle **6** 1950 pp. 210–221, 20 figs. [Hym.]
- Fritz, W. see Hadorn & Fritz.
- 1002.—Fritz-Niggli, H. & Böni, A. Biological experiments on *Drosophila melanogaster* with supersonic vibrations. Science, Lancaster, Pa. **112** 1950 pp. 120–122, 2 figs. [Dipt.]
- 1003.—Frizzi, G. I cromosomi delle ghiandole salivari di *Drosophila subobscura* Collin. Scientia Genet., Turin **3** 1950 pp. 205–214, 1 figd. pl. [Dipt.]
- 1004.—Frizzi, G. Studio sulla sterilità degli ibridi nel genere *Anopheles* I. Sterilità nell'incrocio fra *Anopheles mac. atroparvus* ed *Anopheles mac. typicus* e nel reincrocio dei cromosomi salivari. Scientia Genet., Turin **3** 1950 pp. 260–270, 3 figs. [Dipt.]
- Fronk, L. E. see Knowlton & Fronk.
- 1005.—Fudalewicz, W. The innervation and sense organs in the wings of the *Typhlocyba* sp. Bull. int. Acad. Cracovie **1949** BII 1950 pp. 419–434, 4 figs. [Hem.]
- 1006.—Fukaya, M. On the factor inducing the dormancy of the rice borer, *Chilo simplex* Butler. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 223–225. [Lep.]
- Fukaya, M. see Kinoshita, Hama & Fukaya.
- 1007.—Fullaway, D. T. *Apanteles* in Hawaii. Proc. Hawaii. Acad. Sci., Honolulu no. 25 1950 p. 7. [Hym.]
- 1008.—Fullaway, D. T. Description of a *Brachymeria* parasitic on *Agonoxena argaula* Meyr. in Samoa. Proc. Hawaii. ent. Soc., Honolulu **14** (1949) 1950 pp. 63–64. [Hym., Lep.]
- 1009.—Fullaway, D. T. Fruit fly parasites collected in Queensland by N. L. H. Krauss in 1949 (Hymenoptera: Braconidae). Proc. Hawaii. ent. Soc., Honolulu **14** (1949) 1950 pp. 65–67.
- Fuller, R. A. see Arnason, Fuller & Spinks.
- Fung Ying Cheng see Cheng.
- 1010.—Funkhouser, W. D. Homoptera. Fam. Membracidae. Gen. Insect., Brussels **208** 1950 383 pp. 14 pls. 9 figs.
- 1011.—Fyg, W. Can workers and queens of the honeybee be raised from unfertilized eggs? Bee World, Hull, Yorks **31** 1950 pp. 17–19, 1 fig. [Hym.]
- 1012.—Gaál, I. Das auffallende Vordringen von *Libythea celtis* Laich. im Karpaten-Becken. [In Magyar with German summary.] Folia ent.-hung., Budapest (N.S.) **3** 1949 pp. 34–40. [Lep.]
- Gabe, M. see Arvy & Gabe; Arvy, Gabe & Lhoste.
- 1013.—Gäbler, H. Larven- und Puppenformen der forstlich wichtigen Trauerschweber. Anz. Schädlingsk., Berlin **23** 1950 pp. 73–75, 6 figs. [Dipt.]
- 1014.—Gahan, A. B. & Wallace, G. E. Note on the identity and distribution of *Hemitrichus rufipes* Thomson (Hymenoptera: Pteromalidae). Ent. News, Lancaster, Pa. **61** 1950 pp. 96–99.
- Gahan see Chiarelli de Gahan.
- 1015.—Gaillat-Airoldi, A. Una nuova *Sciobia* del Marocco. Boll. mus. zool. Anat. comp. Genova **19** 1939 no. 114, 4 pp. 1 fig. [Orth.]
- 1016.—Gairaud, R. & Besson, J. Contribution à l'étude de la biologie du bupreste du pêcher (*Capnodis tenebrionis* L.) dans la Mitidja (Algérie). Rev. Path. vég. Ent. agric. Fr., Paris **29** 1950 pp. 119–136, 2 pls. [Col.]
- Galambos, R. see Williams & Galambos.
- 1017.—Galán, F. Sur une interprétation plus satisfaisante de la phénogénétique du sexe fondée sur l'anéuploïde chez les métazoaires. C.R. 13e Congr. int. Zool. Paris 1948, 1949 pp. 176–177. [Dipt.]

- 1018.**—**Galvagni, A.** Contributo alla conoscenza dell'Ortottero fauna del Trentino e del Veneto. *Boll. Soc. ent. ital.*, Genoa **80** 1950 pp. 57–64, 3 figs.
- 1019.**—**Galvagni, E. & Ortner, A.** Ueber die Schmetterlingsfauna der Schmidawiesen bei Neu-Aigen sowie des Tullnerfeldes überhaupt (Zone 15 des Prodromus). *Z. wien. ent. Ges.*, Vienna **35** 1950 pp. 50–61.
- 1020.**—**Galvão, A. B.** Do diagnóstico diferencial entre *A. (N.) strodei* e *A. (N.) pessoi* na fase larvária. *Rev. brasil. Malariol.*, Rio de Janeiro **2** 1950 pp. 38–48, 2 figs. [Dipt.]
- 1021.**—**Gambaro, P.** Osservazioni sul grado di fecondità dell'*Aspidiotus perniciosus* Comst. nel Veneto (Hemiptera : Coccoidea). *Boll. Soc. ent. ital.*, Genoa **80** 1950 pp. 75–82.
- Gammons, J. G.** see Traub & Gammons.
- Gans, J.** see Hassett, Dethier & Gans.
- 1022.**—**Gapuz, R. B. & Santiago, D.** A supplementary guide for rapid identification of the larvae of *Anopheles minimus flavirostris* (Ludlow) and *Anopheles mangyanus* (Banks). *Philipp. J. Sci., Manila* **78** 1949 [?1950] pp. 127–133, 4 pls. [Dipt.]
- 1023.**—**García-Tejero, F. D.** Tentredíños perjudiciales a la agricultura. *Bol. Pat. veg. Ent. agríc.*, Madrid **17** (1949) 1950 pp. 163–208, 23 figs. [Hym.]
- 1024.**—**Gardner, A. E.** The life-history of *Sympetrum striolatum striolatum* (Charpentier) (Odonata). *Ent. Gaz.*, London **1** 1950 pp. 54–60, 11 figs.
- 1025.**—**Gardner, A. E.** The life-history of *Aeshna mixta* Latreille (Odonata). *Ent. Gaz.*, London **1** 1950 pp. 128–138, 18 figs.
- 1026.**—**Gardner, E. J. & Woolf, C. M.** The influence of high and low temperatures on the expression of tumorous head in *Drosophila melanogaster*. *Genetics, Menasha* **35** 1950 pp. 44–55. [Dipt.]
- 1027.**—**Garrett-Jones, C.** The genus *Hilara* (Dipt., Empididae) at Flatford, East Suffolk. *Ent. mon. Mag.*, London **86** 1950 pp. 260–264.
- 1028.**—**Garrett-Jones, C.** Dispersion of mosquitoes by wind. *Nature*, London **165** 1950 p. 285. [Dipt.]
- 1029.**—**Gaud, J. & Laurent, J.** Les soies doublées chez les larves d'*Anopheles*. *Ann. Parasit. hum. comp.*, Paris **25** 1950 pp. 480–484, 2 pls. [Dipt.]
- 1030.**—**Gavrilov, K.** Ensayos sobre la espermatización de *Schistocerca*. (Contribución al problema de las espermatotoxinas.) *Acta zool. illoana, Tucuman* **8** 1949 pp. 55–82. [Orth.]
- 1031.**—**Gebien, H.** Die Tenebrioiden der Guinea-Inseln. *Zool. Anz.*, Leipzig **138** 1942 pp. 106–126, 11 figs. [Col.]
- 1032.**—**Geier, P.** Note préliminaire sur l'hivernage de *Quadrastiodius perniciosus* Comst. (Hémipt. Diaspidoïde). *Mitt. schweiz. ent. Ges.*, Berne **23** 1950 pp. 329–336, 4 figs.
- Geier, P.** see Bachmann & Geier.
- 1033.**—**Geigy, R.** L'hypertrophie parasitaire de la femelle de *Tunga penetrans*. *C.R. 13e Congr. int. Zool. Paris* 1948, 1949 p. 495. [Siphonapt.]
- 1034.**—**Gerhardinger, K.** Temperaturversuche mit *Thais polyxena* Schiff. *Wien. ent. Rdsch.*, Vienna **1** 1949 no. 3 pp. 13–16; **2** 1950 pp. 10–13, 4 figs. [Lep.]
- 1035.**—**Gerhardinger, K.** Temperaturversuche mit *Thais polyxena* Schiff. Ein Nachtrag. *Ent. NachrBl. öst. schweiz. Ent.*, Vienna **2** 1950 pp. 52–55, 74–76, 87–89. [Lep.]
- 1036.**—**Gerhardinger, K.** Ueber den Einfluss unterschiedlicher atmosphärischer Druckverhältnisse bei Rhescyntinae. *Z. wien. ent. Ges.*, Vienna **35** 1950 pp. 89–99, 4 figs. [Lep.]
- 1037.**—**Gerwel, C.** The embryonic development of *Porphyrophora polonica* Ckll. (Coccidae). Part I. [In Polish with English summary.] *Prace Kom. biol. Wydz. mat.-przyr. poznań. Tow. Przyj. Nauk* **12** 1950 no. 3, 33 pp. 11 figs. [Hem.]

1038.—**Gese, P. K.** The concentration of certain inorganic constituents in the blood of *Cynthia pupa Samia walkeri* Felder and Felder. *Physiol. Zool.*, Chicago **23** 1950 pp. 109–113. [Lep.]

Gessner, B. see Seiler & Gessner.

1039.—**Geurts, R.** Aantekeningen over bijen en wespen in Midden-Limburg I. *Natuurh. Maandbl., Maastricht* **39** 1950 pp. 105–107. [Hym.]

1040.—**Geyer, J. W.** Hermaphroditic termites. *J. ent. Soc. Sthn Africa, Pretoria* **13** 1950 pp. 106–107. [Isopt.]

1041.—**Ghelelovitch, S.** Etude génétique de deux caractères de pigmentation chez *Culex autogenicus* Roubaud. *Bull. biol., Paris* **84** 1950 pp. 217–224. [Dipt.]

1042.—**Ghelelovitch, S.** Une nouvelle tumeur héréditaire chez la Drosophile (*Drosophila melanogaster* Meig.). *C.R. Acad. Sci., Paris* **230** 1950 pp. 1002–1004. [Dipt.]

Ghelelovitch, S. see Roubaud & Ghelelovitch.

1043.—**Ghesquière, J.** Le genre *Copidosomopsis* Girault nouveau pour la faune de l'Autriche. *Bull. Ann. Soc. ent. Belg., Brussels* **86** 1950 pp. 176–177. [Hym.]

1044.—**Ghesquière, J.** Le type du *Stictomischus phytomyzae* Ashmead (MS) (Hym. Chalcidoidea Pteromalidae). *Bull. Mus. Hist. nat., Paris* (2) **21** (1949) 1950 pp. 566–568.

1045.—**Ghesquière, J.** Un *Cryptochaetus* nouveau de Malaisie (Diptera Muscoidea, Cryptochaetidae). *Bull. Mus. Hist. nat., Paris* (2) **22** 1950 pp. 587–589, 3 figs.

1046.—**Ghesquière, J.** Le genre *Anthemus* Howard nouveau pour la faune éthiopienne (Hym. Chalcidoidea Encyrtidae). *Proc. 8th int. Congr. Ent. Stockholm* 1948, 1950 pp. 130–136, 2 figs.

1047.—**Ghesquière, J.** Les types de l'*Agonioneurus pictus* André et du *Coccophagus pantherinus* Giraud et leur synonymie (Hym. Chalcidoidea Aphelinidae). *Rev. franç. Ent., Paris* **17** 1950 pp. 38–42.

1048.—**Gibson-Hill, C. A.** Notes on the insects taken on the Cocos-Keeling Islands. *Bull. Raffles Mus., Singapore* no. 22 1950 pp. 149–165.

1049.—**Gibson-Hill, C. A.** Hemiptera collected on the Cocos-Keeling Islands, January–October, 1941. *Bull. Raffles Mus., Singapore* no. 23 1950 pp. 205–211.

1050.—**Gillespie, D. S. & Cole, A.C.** Measurements in the worker caste of two species of *Eciton* (*Neivamyrmex* Borgmeier) (Hymenoptera : Formicidae). *Amer. Midl. Nat., Notre Dame* **44** 1950 pp. 203–204, 1 fig.

Gillespie, D. S. see Cole & Gillespie.

1051.—**Gilmour, E. F.** New and rare Lamiinae. *Longicornia, Paris* **1** 1950 pp. 537–556, 10 figs.

1052.—**Gilmour, E. F.** New Onciderini (Col., Cerambycidae, Lamiinae). *Rev. Ent., Rio de Janeiro* **21** 1950 pp. 537–544, 3 figs.

1053.—**Gilmour, E. F.** New Dutch East Indian Lamiinae (Col., Cerambycidae). *Tijdschr. Ent., Amsterdam* **92** (1949) 1950 pp. 219–247, 13 figs.

1054.—[**Gilyarov, M. S.**] Ecological and morphological causes of the excretion of honey dew by aphids (Aphididae) and other Homoptera. [In Russian.] *C.R. Acad. Sci. URSS, Moscow (N.S.)* **60** 1948 pp. 477–480.

1055.—**Giordani Soika, A.** Nuovi Vespidi etiopici (Hymenoptera—Vespidae). *Boll. Soc. ent. ital., Genoa* **80** 1950 pp. 43–47.

1056.—**Gisin, H.** Quelques Collemboles cavernicoles d'Italie du Nord. *Boll. Soc. ent. ital., Genoa* **80** 1950 pp. 93–95.

1057.—**Gisin, H.** Notes sur les Collemboles avec une espèce, un nom et trois synonymes nouveaux. *Mitt. schweiz. ent. Ges., Berne* **23** 1950 pp. 411–416, 2 figs.

1058.—**Given, B. B.** Notes on the Aphodiinae of Australia (Coleoptera, Scarabaeidae). The *Aphodius tasmaniae, howitti, yorkensis, andersoni* complex. *Proc. Linn. Soc. N.S.W., Sydney* **75** 1950 pp. 153–157, 10 figs.

1059.—Glass, B. & Plaine, H. I. The immediate dependence of the action of a specific gene in *Drosophila melanogaster* upon fertilization. Proc. nat. Acad. Sci. U.S.A., Washington **36** 1950 pp. 627–634, 1 fig. [Dipt.]

1060.—Glen, R. Larvae of the Elaterid beetles of the tribe Lepturoi-dini (Coleoptera : Elateridae). Smithson. misc. Coll., Washington **111** 1950 no. 11, 246 pp., 40 figs.

Glinyanaya, E. I. see Danilevskii & Glinyanaya.

1061.—Gliwic, W. H. On an alleged adjustment of body louse to colours (*P. humanus corporis*). Bull. Inst. mar. trop. Med. Gdańsk **2** 1949 pp. 95–96. [Anopl.]

1062.—Gloor, H. Schädigungs-muster eines Letalfaktors (Kr) von *Drosophila melanogaster*. Arch. Klaus-Stift. VererbForsch. Zürich **25** 1950 pp. 38–44, 4 figs. [Dipt.]

1063.—Gloor, H. & Chen, P. S. Ueber ein Analorgan bei *Drosophila*-Larven. Rev. suisse Zool., Geneva **57** 1950 pp. 570–576, 2 figs. [Dipt.]

1064.—Goding, F. W. The Old World Membracidae [concl.]. J. New York ent. Soc. **58** 1950 pp. 117–129, 251–268. [Hem.]

1065.—Goetghebuer, M. Biologie des Chironomides (Diptères Nema-tocères). Biol. Jaarb., Antwerp **17** 1950 pp. 58–65.

1066.—Goetghebuer, M. Les Chiro-nomides de la région du Bas-Escaut. Bull. Ann. ent. Soc. Belg., Brussels **86** 1950 pp. 141–163. [Dipt.]

1067.—Goetghebuer, M. Ceratopo-gonidae et Chironomidae nouveaux ou peu connus d'Europe (quatorzième note). Bull. Inst. Sci. nat. Belg., Brussels **26** 1950 no. 47, 15 pp., 16 figs.

1068.—Goetsch, W. Wirkstoff. T. Verh. dtsch. zool. Mainz 1949, Leipzig 1950 pp. 269–277.

1069.—Goldschmidt, R. B. Neue Tatsachen zur Analyse der Geschlechtsbestimmung bei *Drosophila melanogaster*. Arch. Klaus-Stift. VererbForsch. Zürich **23** (1948) 1949 pp. 539–549, 2 figs. [Dipt.]

1070.—Goldschmidt, E. D., Harnly, M. H. & Tobias, E. B. Folic acid analogs in lower animals. I. The Insecta : *Drosophila melanogaster*. Ann. New York Acad. Sci. **52** 1950 pp. 1342–1345, 2 figs. [Dipt.]

Goldschmidt, R. M. see Penn. & Goldsmith.

1071.—Gomes, J. G. & Gonçalves, A. L. Generalidades sobre o método de criação do *Trichogramma* na estação fitossanitária de S. Bento—D.D.S.V. Bol. Fitossanit., Rio de Janeiro **3** 1946 [1950] pp. 171–184, 10 figs. [Hym.]

1072.—Gómez-Menor, J. La chin-cheta del almendro (*Monostira unicostata* Mulsant). Bol. Pat. veg. Ent. agríc., Madrid **17** (1949) 1950 pp. 97–110, 5 figs. [Hem.]

Gómez-Menor, J. see Carayon & Gómez-Menor.

Gonçalves, A. L. see Gomes & Gonçalves.

Gonçalves, T. see Silva Cruz & Gonçalves.

1073.—Goodhue, L. D. & Linnard, C. E. Air separation for cleaning fly pupae. J. econ. Ent., Menasha **43** 1950 p. 228, 1 fig.

Goodsmith, W. see Hinton & Goodsmith.

1074.—Goodwin, T. W. Biochemistry of locusts. 4. Insectorubin metabolism in the desert locust (*Schistocerca gregaria* Forsk.) and the African migratory locust (*Locusta migratoria migratorioides* R. and F.). Biochem. J., Cambridge **47** 1950 pp. 554–562, 2 figs. [Orth.]

1075.—Goodwin, T. W. & Srisukh, S. Biochemistry of locusts. 3. Insectorubin: the redox pigment present in the integument and eyes of the desert locust (*Schistocerca gregaria* Forsk.), the African migratory locust (*Locusta migratoria migratorioides* R. and F.) and other insects. Biochem. J., Cambridge **47** 1950 pp. 549–554, 5 figs.

1076.—Gordon, R. M. & Crewe, W. Man's reaction to the bites of certain Arthropods. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 66–68.

1077.—**Goslin**, R. M. Some robber flies from Campbell county Tennessee. *J. Tenn. Acad. Sci.*, Nashville **25** 1950 pp. 303–306. [Dipt.]

1078.—**Goslin**, R. M. Additional records of *Boreus brumalis* (Mecoptera: Boreidae) from Tennessee. *J. Tenn. Acad. Sci.*, Nashville **25** 1950 p. 309.

Gosselin, M. T. *see* Balachowsky & Gosselin.

1079.—**Gösswald**, K. Pflege des Ameisenparasiten *Tamiclea globula* Meig. (Dipt.) durch den Wirt mit Bemerkungen über den Stoffwechsel in den parasitierten Ameisen. *Verh. dtsch. Zool. Mainz*, Leipzig 1950 pp. 256–264, 7 figs. [Dipt., Hym.]

1080.—**Gouguenheim**, M. R., **Perrier**, D. & **Rungs**, C. Remarques sur les larves de deux buprestides du système radiculaire des Rosacées fruitières (*Capnodis tenebrionis* L. et *Aurigena unicolor* Ol.). *Rev. Path. vég. Ent. agric. Fr.*, Paris **29** 1950 pp. 152–157, 1 fig. [Col.]

1081.—**Gouin**, F. La morphologie de l'appareil buccal d'*Eulalia* sp. (Dipt. Stratiomyidae). *Bull. Soc. ent. France*, Paris **55** 1950 pp. 22–26, 2 figs.

1082.—**Gouin**, F. Recherches sur la morphologie de l'appareil buccal des Diptères. *Mém. Mus. Hist. nat.*, Paris (N.S.) **28** 1949 pp. 167–269, 3 pls. 64 figs.

1083.—**Gouin**, F. Structure morphologique de labium diptéroïde ; son évolution. *Proc. 8th int. Congr. Ent. Stockholm* 1948, 1950 pp. 544–547, 2 figs.

1084.—**Gouin**, F. L'appareil buccal de *Tipula* sp. *Proc. 8th int. Congr. Ent. Stockholm* 1948, 1950 pp. 548–550, 3 figs. [Dipt.]

1085.—**Gouin**, F. La maxille et son évolution chez les Diptères Brachycères. *Proc. 8th. int. Congr. Ent. Stockholm* 1948, 1950 pp. 551–553, 2 figs.

1086.—**Gouin**, F. Evolution de la région clypéo-cibariale chez les Diptères Brachycères. *Proc. 8th. int. Congr. Ent. Stockholm* 1948, 1950 pp. 554–556.

Goulet, P. *see* Teitelbaum & Goulet.

1087.—**Gourlay**, E. S. Auckland Island Coleoptera. *Trans. Proc. roy. Soc. N.Z.*, Wellington **78** 1950 pp. 171–202, 3 pls. 15 figs.

1088.—**Goustard**, M. Sur le comportement de *Blatella germanica* en lumière blanche. *C.R. Soc. Biol.*, Paris **144** 1950 pp. 485–486. [Orth.]

1089.—**Gowin**, F. & **Thienemann**, A. Zwei neue Orthocladiinen-Arten aus Lunz (Niederdonau). *Zool. Anz.*, Leipzig **140** 1942 pp. 101–109, 8 figs. [Dipt.]

1090.—**Gozmány**, L. Lepidopterenfaunistische Sammelergebnisse in der Umgebung des Teiches von Velence. [In Magyar with German summary.] *Folia ent. hung.*, Budapest **8** 1943 pp. 29–32.

1091.—**Graber**, H. Genetische, entwicklungsphysiologische und morphogenetische Untersuchungen an der Mutante "spermatheca" (spt) von *Drosophila melanogaster*. *Z. indukt. Abstamm.- u. Vererb. Lehre*, Berlin **83** 1949 pp. 106–135, 14 figs. [Dipt.]

1092.—**Gradl**, F. *Arctia flavia* Fuessly, "der Engadiner-Bär" in den Urgesteinsalpen Vorarlbergs. *Z. wien. ent. Ges.*, Vienna **35** 1950 pp. 22–25. [Lep.]

1093.—**Graff**, P. *Leptinotarsa decemlineata* Col. Chrysomelidae. Monographie et variétés. [concl.] *Bull. Soc. ent. Mulhouse* **1950** 1950 pp. 17–21.

1094.—**Graham**, M. W. R. de V. Further records of Hymenoptera Symphyta and Aculeata in Lincolnshire. *Ent. mon. Mag.*, London **86** 1950 pp. 37–38.

1095.—**Graham**, M. W. R. de V. Eggs of unknown insect deposited on the body of Sphecid wasps. *Ent. mon. Mag.*, London **86** 1950 pp. 348–351, 3 figs. [Hym.]

1096.—**Graham**, M. W. R. de V. Postural habits and colour-pattern evolution in Lepidoptera. *Trans. Soc. Br. Ent.*, Bournemouth **10** 1950 pp. 217–232, 4 pls. 4 figs.

Graham, M. W. R. de V. *see* Stelfox & Graham.

Gralén, N. *see* Lagermalm, Philip & Gralén.

1097.—**Granger**, C. Contribution à l'étude de l'Air. Hyménoptères Braconidae et Ichneumonidae. Mém. Inst. franç. Afr. noire, Paris no. 10 1950 pp. 283–284.

1098.—**Grassé**, P. P. Termites et sols tropicaux. Rev. int. Bot. appl., Paris 30 1950 pp. 549–554. [Isopt.]

1099.—**Grassé**, P. P. & **Heim**, R. Un *Termitomyces* sur meules d'un *Ancistrotermes* africain. Rev. sci., Paris 88 1950 fasc. 1 pp. 3–33, 14 figs. [Isopt.]

1100.—**Grassé**, P. P. & **Noirot**, C. Documents sur la biologie de l'*Odonotermes magdalena* n. sp. Ann. Sci. nat., Paris Zool. (11) 12 1950 pp. 117–143, 3 pls. [Isopt.]

1101.—**Grassé**, P. P., **Noirot**, C., **Clément**, G. & **Buchli**, H. Sur la signification de la caste des ouvriers chez les termites. C.R. Acad. Sci., Paris 230 1950 pp. 892–895. [Isopt.]

1102.—**Green**, J. The feeding habits of *Cylindronotus laevioctostriatus* (Goeze) (Col., Tenebrionidae). Ent. mon. Mag., London 86 1950 pp. 92–93.

1103.—**Green**, J. A teratological specimen of *Cylindronotus laevioctostriatus* (Goeze) (Col., Tenebrionidae). Ent. mon. Mag., London 86 1950 pp. 93, 4 figs.

1104.—**Green**, J. A biometric study of *Chrysolina polita* (L.) (Col., Chrysomelidae). Ent. mon. Mag., London 86 1950 pp. 257–259, 3 figs.

1105.—**Green**, J. W. The Lycidae of the United States and Canada. II. The tribe Lygistopterini (Coleoptera). Trans. Amer. ent. Soc., Philadelphia 76 1950 pp. 13–25, 1 pl.

1106.—**Gregg**, R. E. A new species of *Pheidole* from the southwest. J. New York ent. Soc. 58 1950 pp. 89–93, 1 fig. [Hym.]

1107.—**Grégoire**, C. & **Florkin**, M. Etapes de la coagulation du sang des insectes examinée au microscope à contraste de phase (Wild). Arch. int. Physiol., Paris & Liège 57 1949 pp. 237–238.

1108.—**Grégoire**, C. & **Florkin**, M. Etude au microscope à contraste de phase du coagulocyte, du nuage granulaire et de la coagulation plasmatique dans le sang des Insectes. Experientia, Basle 6 1950 pp. 297–298, 1 fig. [Orth.]

1109.—**Grégoire**, C. & **Florkin**, M. Blood coagulation in Arthropods I. The coagulation of insect blood, as studied with the phase contrast microscope. Physiol. comp. oecol., The Hague 2 1950 pp. 126–139, 10 pls.

1110.—**Gregor**, F. & **Povolný**, D. The genus *Pleurota* Hb. in Moravia (Lep. Gelechiidae). [In Czech and English.] Acta. Soc. ent. Čsl., Prague 47 1950 pp. 38–41, 12 figs.

1111.—**Gremminger**, A. Lepidopterologisches über den Kaiserstuhl. Z. Lepid., Krefeld 1 1950 pp. 49–52.

1112.—**Grenier**, P. Simuliidae de l'est congolais (description des nymphes et imagos ♂ et ♀ de : *S. neavei* Roub. (?) et *S. marlieri* n. sp.). Bull. Soc. Path. exot., Paris 43 1950 pp. 92–100, 2 figs. [Dipt.]

1113.—**Grenier**, P. Remarques à propos de *Simulium bezzii*, Corti 1916 espèce méditerranéenne présente en France (Dipt. Simuliidae). Entomologiste, Paris 5 (1949) 1950 pp. 136–140, 1 fig.

1114.—**Grenier**, P. & **Bertrand**, H. Un cas d'intersexualité chez *Simulium auricoma* Mg. (Dipt.). Bull. biol. Fr. Belg., Paris 83 (1949) 1950 pp. 387–391, 1 fig. [Dipt.]

1115.—**Grenier**, P. & **Bertrand**, H. Simuliidae de la région orientale des Pyrénées. Complément à la description des différents stades de *S. auricoma* Mg. Bull. Soc. zool. Fr., Paris 74 (1949) 1950 pp. 294–299, 2 figs. [Dipt.]

1116.—**Grenier**, P. & **Verrier**, M. L. Note anatomique et biologique sur une larve nouvelle de *Chitonophora* (Ephemeroptera). Bull. Soc. ent. France, Paris 55 1950 pp. 19–22, figs.

1117.—**Gressitt**, J. L. The Hispina beetles of China (Coleoptera : Chrysomelidae). Lingnan Sci. J., Canton 23 1950 pp. 53–142, 5 pls.

1118.—**Gressitt, J. L.** Liste des publications scientifiques sur les Longicornes. *Longicornia*, Paris 1 1950 pp. 595–597.

1119.—**Gressitt, J. L.** Two new oriental Prionids of the genus *Megopis* (Coleoptera : Cerambycidae). *Pan-Pacif. Ent.*, San Francisco 26 1950 pp. 134–136.

1120.—**Gressitt, J. L.** A new Prionid Longicorn beetle from the Loyalty Islands (Coleoptera : Cerambycidae). *Proc. Hawaii. ent. Soc., Honolulu* 14 1950 pp. 69–71, 1 fig.

Greve, H. see Nielsen & Greve.

1121.—**Gridelli, E.** Coleotteri dell'Africa tropicale. XVII contributo. Ulteriori appunti per una monografia delle specie africane del genere *Gonocephalum* Sol. (Coleopt. Tenebr.). *Atti Mus. Stor. nat. Trieste* 17 1948 pp. 1–56, 33 figs.

1122.—**Gridelli, E.** Contribution à l'étude de l'Air. Coléoptères Tenebrionidae. *Mém. Inst. franç. Afr. noire*, Paris no. 10 1950 pp. 153–180, 3 figs.

1123.—**Grimalschi, V.** Eine neue Art von *Sisyra*-Larve. *Zool. Anz.*, Leipzig 130 1940 pp. 201–206, 5 figs. [Neur.].

1124.—**Grison, P.** Influence de la température sur l'activité du doryphore (*Leptinotarsa decemlineata* Say) au stade imaginaire. *Proc. 8th int. Congr. Ent. Stockholm* 1948, 1950 pp. 226–234, 7 figs. [Col.]

1125.—**Grison, P., Feron, M. & Sacantanis, K.** Développement de la mouche des fruits (*Ceratitis capitata* Wied.) en milieu nutritif synthétique. *C.R. Acad. Sci., Paris* 231 1950 pp. 996–998. [Dipt.]

1126.—**Grison, P. & Viel, G.** Variation de l'effet toxique de produits insecticides en fonction du stade larvaire des insectes. *C.R. Acad. Sci., Paris* 231 1950 pp. 1090–1092.

1127.—**Grjebine, A.** Moustiques du Moyen-Congo. *Bull. Inst. Etud. centrafr., Brazzaville N.S.* no. 1 1950 pp. 25–48. [Dipt.]

1128.—**Grjebine, A.** Un nouveau moustique forestier de la Basse Côte d'Ivoire *Eretmapodites pauliani* n. sp. *Bull. Soc. Path. exot., Paris* 43 1950 pp. 45–50, 3 figs. [Dipt.]

1129.—**Grönvall, J. S.** Beiträge zur Kenntnis der Verbreitung und Biologie von *Cossus terebra*. *Proc. 8th int. Congr. Ent. Stockholm* 1948, 1950 pp. 781–784, 6 figs. [Lep.]

1130.—**Groot, A. P. de.** The influence of temperature and kind of food on the increase in the nitrogen content of the young worker honey-bee (*Apis mellifica* L.). *Proc. K. ned. Akad. Wet. Amsterdam* 53 1950 pp. 560–566, 3 figs. [Hym.]

1131.—**Grosch, D. S.** Olfactometer experiments with male Braconids. *Ann. ent. Soc. Amer., Columbus* 43 1950 pp. 334–342. [Hym.]

1132.—**Grosch, D. S.** Starvation studies with the parasitic wasp *Habrobracon*. *Biol. Bull., Lancaster, Pa.* 99 1950 pp. 65–73, 2 figs. [Hym.]

1133.—**Grosch, D. S.** Cytological aspects of growth in impregnate (male) larvae of *Habrobracon*. *J. Morph., Philadelphia* 86 1950 pp. 153–176, 5 figs. [Hym.]

1134.—**Gross, G. F.** The stilt-bugs (Heteroptera-Neididae) of the Australian and New Zealand regions. *Rec. S. Aust. Mus., Adelaide* 9 1950 pp. 313–326, 4 figs.

1135.—**Gross, G. F.** On a new species of Cryptostemmatidae (Hemiptera-Heteroptera) from Australia. *Rec. S. Aust. Mus., Adelaide* 9 1950 pp. 327–329, 1 fig.

Grove, A. J. see Whitehouse & Grove.

1136.—[**Grunin, K. Ya.**] Larvae of the subcutaneous botflies of rodents of the genus *Oestromyia* Br. of the fauna of the U.S.S.R. [In Russian.] *C.R. Acad. Sci. URSS, Moscow (N.S.)* 73 1950 pp. 621–624, 13 figs. [Dipt.]

1137.—[**Grunin, K. Ya.**] Botflies of the goitrous antelope (*Procarpa gutturosa* Gmel.) from the Mongolian People's Republic. [In Russian.] *C.R. Acad. Sci. URSS, Moscow (N.S.)* 73 1950 pp. 861–864, 2 figs. [Dipt.]

1138.—[Grunin, K. Ya.] A subcutaneous parasite of the muskdeer—*Pavlovskomyia inexpectata* gen. n., sp. n. (Diptera, Calliphoridae). [In Russian.] Parasit. Sborn., Moscow 9 1948 pp. 183–190.

Guedes, A. S. see Rachou, Ricciardi & Guedes.

1139.—Guénin, H. A. Chromosomes et hétérochromosomes de Ténébrionidés. Arch. Klaus-Stift. VererbForsch. Zürich 25 1950 p. 28. [Col.]

1140.—Guénin, H. A. Chromosomes et hétérochromosomes de Ténébrionidés. Genetica, 's Gravenhage 25 1950 pp. 157–182, 81 figs. [Col.]

1141.—Guérin, J. Catálogo dos Erytylidae (Col.) das coleções do Instituto de Ecología e Experimentação Agrícolas de Ministerio de Agricultura, com a descrição de algumas espécies novas. Bol. Inst. Ecol. Exp. agric., Rio de Janeiro no. 8 1948 23 [+I] pp. 2 pls.

1142.—Guessous, A. Recherches sur la ponte du capnode noir des arbres fruitiers (*Capnodis tenebrionis* L.). Rev. Path. vég. Ent. agric. Fr., Paris 29 1950 pp. 137–151. [Col.]

1143.—Guffroy, C. A propos des dates d'apparition de *Gonepteryx rhamni* L. Bull. Un. Soc. franç. Hist. nat., Versailles no. 3 1950 pp. 87–88. [Lep.]

1144.—Guiglia, D. Missione biologica Sagan-Omo diretta dal Prof. Edoardo Zavattari, Hymenoptera: Tenthredinidae, Scoliidae, Pompilidae, Sphecidae. Ann. Mus. Stor. nat., Genova 64 1950 pp. 207–260, 1 pl. 12 figs.

1145.—Guiglia, D. Contribution à l'étude de l'Air. Hyménoptères Scoliidae. Mém. Inst. franç. Afr. noire, Paris no. 10 1950 pp. 301–306.

1146.—Guiglia, D. Appunti intorno al *Chalinus congoensis* Guiglia (Hymen. Phytophaga). Rev. Zool. Bot. afr., Brussels 43 1950 pp. 315–317.

1147.—Guignot, F. Trente-troisième note sur les Hydrocanthaires. Bull. Inst. Sci. nat. Belg., Brussels 26 1950 no. 36, 10 pp. 3 figs. [Col.]

1148.—Guignot, F. Trentième note sur les Hydrocanthaires (Col.). Bull. Soc. ent. Fr., Paris 54 (1949) 1950 pp. 146–153, 2 figs.

1149.—Guignot, F. Trente-et-unième note sur les Hydrocanthaires. Bull. Soc. linn. Lyon 19 1950 pp. 25–28. [Col.]

1150.—Guignot, F. Sur la systématique des *Dineutus* (Col. Gyrinidae). Bull. Soc. linn. Lyon 19 1950 pp. 124–127.

1151.—Guignot, F. Trente-quatrième note sur les Hydrocanthaires. Ent. Arb., München 1 1950 pp. 270–272, 2 figs. [Col.]

1152.—Guignot, F. Contribution à l'étude de l'Air. Coléoptères Dytiscidae et Gyrinidae. Mém. Inst. franç. Afr. noire, Paris no. 10 1950 pp. 260–263.

1153.—Guignot, F. Description de deux Dytiscides nouveaux de Madagascar (Coléoptères). Nat. Malgache, Tananarive 2 1950 pp. 127–129.

1154.—Guignot, F. Trente-deuxième note sur les Hydrocanthaires. Rev. franç. Ent., Paris 17 1950 pp. 96–104. [Col.]

1155.—Guignot, F. Description de deux nouveaux Dytiscides du Congo belge. Rev. Zool. Bot. afr., Brussels 43 1950 pp. 211–212, 2 figs. [Col.]

1156.—Guimarães, L. R. Sobre uma nova espécie de *Pterophtirus* Ewing 1923 (Anoplura). Papéis avulsos Dep. Zool., São Paulo 9 1950 pp. 83–88, 10 figs.

1157.—Guimarães, L. R. Sobre alguns géneros e espécies de Heptapsogastridae (Mallophaga)—V. Papéis avulsos Dep. Zool. São Paulo 9 1950 pp. 249–258, 3 figs.

1158.—Guimarães, L. R. Pequenas notas sobre malofágos. II. Papéis avulsos Dep. Zool., São Paulo 9 1950 pp. 321–340, 1 fig.

1159.—Guppy, R. Biology of *Anisolabis maritima* (Géné) the seaside earwig, on Vancouver Island (Dermaptera, Labiduridae). Proc. ent. Soc. B.C., Kamloops, B.C. 46 1950 pp. 14–18.

Gupta, J. D. see Chaudhuri & Gupta.

- 1160.—**Gupta, P. D.** On the structure, development and homology of the female reproductive organs in Orthopteroid insects. Indian J. Ent., New Delhi **10** (1948) 1950 pp. 75–123, 25 figs.
- 1161.—**Gurney, A. B.** An African earwig new to the United States, and a corrected list of the Nearctic Dermaptera. Proc. ent. Soc. Washington **52** 1950 pp. 200–203.
- 1162.—**Gussakovskii, V. V.** Fauna of the USSR. Insectes Hyménoptères. Vol. II no. 2. Chalastogastra (partie 2). [In Russian with English summary and descriptions.] Inst. zool. Acad. Sci. URSS, Moscow (N.S.) no. 32 1947 235 pp. 121 figs.
- 1163.—**Gustafson, J. F.** The origin and evolution of the genitalia of the insecta. Microentomology, Stanford Univ. **15** 1950 pp. 35–67, 9 figs.
- 1164.—**Gutiérrez Alonso, R.** Scarabaeidae del Norte de Chile (Coleopt. Lamellic.). An. Soc. cient. argent., Buenos Aires **149** 1950 pp. 52–75, 15 figs.
- 1165.—**Gutiérrez Alonso, R.** Notas sobre Scarabaeidae chilenos (Coleoptera Lamellicornia). Arthropoda, Buenos Aires **1** 1950 pp. 267–278, 1 fig.
- Gvozdenović, M.** see Simić, Gvozdenović & Kostić.
- Haasser, C.** see Huber & Haasser.
- 1166.—**Habu, A.** On some cave-dwelling Carabidae from Japan (Coleoptera). Mushi, Fukuoka **21** 1950 pp. 49–53, 3 pls.
- 1167.—**Hachfeld, G.** Oekologische und morphologische Beobachtungen an mitteleuropäischen Crabronen (Hym. Sphec.) I. Zool. Jb., Jena (Syst.) **77** (1944) 1945 pp. 49–80, 24 figs.
- 1168.—**Hackman, W.** Lepidopterologiska iakttagelser i Utsjoki socken 1949. Notul. ent., Helsinki **30** 1950 pp. 18–22, 1 fig.
- 1169.—**Hackman, W.** Zwei neue Kleinschmetterlinge aus Finnland. Notul. ent., Helsinki **30** 1950 pp. 23–25, 3 figs. [Lep.]
- 1170.—**Haddow, A. J. & Someren, E. C. C. van.** A new species of *Stegomyia* Theobald from the Ruwenzori range, Uganda. Ann. trop. Med. Parasit., Liverpool **44** 1950 pp. 281–284, 1 fig. [Dipt.]
- 1171.—**Hadorn, E.** Begriffe und Termini zur Systematik der Letalfaktoren. Arch. Klaus-Stift. Vererb-Forsch. Zürich **24** 1949 pp. 105–113.
- 1172.—**Hadorn, E.** Entwicklungsphysiologische Untersuchungen an den Genital-Imaginalscheibe von *Drosophila*. C.R. 13e Congr. int. Zool. Paris 1948, 1949 pp. 273–275. [Dipt.]
- 1173.—**Hadorn, E.** Physiogenetische Ergebnisse der Untersuchungen an *Drosophila*-Blastemen aus letalen Genotypen. Rev. suisse Zool., Geneva **57** 1950 Suppl. I pp. 115–128, 2 figs. [Dipt.]
- 1174.—**Hadorn, E. & Fritz, W.** Veränderungen am transplantierten weiblichen Geschlechtsapparat von *Drosophila melanogaster* nach Behandlung der Imaginalscheibe in Salzlösungen. Rev. suisse Zool., Geneva **57** 1950 pp. 477–488, 4 figs. [Dipt.]
- 1175.—**Hafez, M.** On the behaviour and sensory physiology of the housefly larva, *Musca domestica* L. I. Feeding stage. Parasitology, London **40** 1950 pp. 215–236, 28 figs. [Dipt.]
- 1176.—**Hagen, H. R.** Embryology of the viviparous insects. [Abstract.] Trans. New York Acad. Sci. (2) **12** 1950 p. 112.
- 1177.—**Hagen, K. S.** Fecundity of *Chrysopa californica* as affected by synthetic foods. J. econ. Ent., Menasha **43** 1950 pp. 101–104, 1 fig. [Neur.]
- 1178.—**Hagen, K. S. & Doutt, R. L.** *Brontispa yoshinoi* Barber, a description of adult and immature stages (Coleoptera : Hispidae). Ann. ent. Soc. Amer., Columbus **43** 1950 pp. 311–319, 17 figs.
- 1179.—**Hagerup, O.** Thrips pollination in *Calluna*. Biol. Medd., Copenhagen **18** 1950 no. 4, 16 pp. 16 pls. 9 figs. [Thysanopt.]
- 1180.—**Haget, A.** Expériences sur l'origine de l'intestin moyen chez l'embryon de *Leptinotarsa* (Insecte, Col.) et sur les facteurs de sa morphogenèse. C.R. Acad. Sci., Paris **230** 1950 pp. 1695–1697, 1 fig.

1181.—**Haget**, A. Mise en évidence d'une induction exercée par l'ectoderme sur le mésoderme dans la morphogenèse embryonnaire de *Leptinotarsa* (Insecte, Col.). C.R. Acad. Sci., Paris **230** 1950 pp. 1788–1790, 1 fig.

1182.—**Haget**, A. Quelques remarques au sujet de larves symèles obtenues par section transversale du germe de *Leptinotarsa*. C.R. Soc. Biol., Paris **144** 1950 pp. 413–414, 4 figs. [Col.]

1183.—**Haget**, A. Mise en évidence dans la blastule de *Leptinotarsa* (Insecte, Col.) d'une zone indispensable au développement embryonnaire normal. C.R. Soc. Biol., Paris **144** 1950 pp. 972–974.

1184.—**Haggett**, G. The life history and habits of *Zeuzera pyrina* Linn. (*aesculi* Linn.) in Britain. Entomologist, London **83** 1950 pp. 73–81, 1 pl. [Lep.]

1185.—**Haggett**, G. & **Williams**, H. B. Genetics and the collector. Ent. Gaz., London **1** 1950 pp. 142–149, 1 chart.

1186.—**Hall**, jr., C. C. The Trichoptera or caddis flies of Dallas County Texas. Field & Lab., Dallas **18** 1950 pp. 165–177, 14 figs.

Hall, L. L. see **Knowlton & Hall**.

Hama, T. see **Kinoshita, Hama & Fukaya**.

1187.—**Hamilton**, A. G. Further studies on the relation of humidity and temperature to the development of two species of African locusts—*Locusta migratoria migratorioides* (R. & F.) and *Schistocerca gregaria* (Forsk.). Trans. R. ent. Soc. London **101** 1950 pp. 1–58, 34 figs. [Orth.]

1188.—**Hammer**, K. Ueber einige von Kjell Kolthoff und anderen in China gesammelten Hymenoptera. Chrysidae, Cleptidae, Mutillidae. Ark. Zool., Stockholm **42A** 1950 no. 8 12 pp.

1189.—**Hammer**, K. On the insect fauna of Cyprus. Results of the expedition of 1939 by Harald, Håkan and P. H. Lindberg. VI. Hymenoptera, Aculeata. II. Chrysidae,

Scoliidae und Mutillidae der Insel Cyprus. Comment. biol., Helsingfors **10** 1950 no. 13, 17 pp. 12 figs.

Hamrum, C. L. see **Frings & Hamrum**.

1190.—**Handschin**, E. Die entomologischen Untersuchungen im schweizerischen Nationalpark im Unterengadin. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 69–73, 1 map.

1191.—**Handschin**, E. Zur Entstehung der Quercyfossilien. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 137–140, 2 figs.

1192.—**Hanitsch**, R. New Blattidae from Belgian Congo. Rev. Zool. Bot. afr., Brussels **43** 1950 pp. 25–38. [Orth.]

Hannes, G. see **Buterandt, Karlson & Hannes**.

1193.—**Hansen**, V. Korchs atlas over danske biller. Copenhagen, Branner og Korch 1950 128 pp. 251 figs. (243 col). [Col.]

1194.—**Hanson**, B. Om baklängesflykt hos *Gonoptyyx rhamni* L. (Lep.). Ent. Tidskr., Stockholm **71** 1950 pp. 223–224, 1 fig.

1195.—**Hanson**, B. H. Långörade fladermusen, *Plecotus auritus* L.; dietlista med kommentarer. Fauna och Flora, Uppsala **1950** 1950 pp. 1–20, 4 figs.

1196.—**Harant**, H. Initiation à l'étude des Cératopogonides français (Dipt. Heleidae). Entomologiste, Paris **5** (1949) 1950 pp. 156–160, 1 fig.

1197.—**Harant**, H. & **Brunel**, D. Sur les *Leptoconops* s. lato (Dipt. Heleidae) du Midi Méditerranéen. Vie et Milieu, Paris **1** 1950 pp. 240–242.

1198.—**Härdh**, H. J. E. *Amblymerus graminum* n. sp. (Hym., Chalcididae), a Pteromalid living in the wheat stem. Ann. ent. fenn., Helsinki **16** 1950 pp. 84–88, 4 figs.

1199.—**Hardouin**, R. Le *Bembex rostré* aux environs de Paris. Bull. Soc. Sci. nat. Seine-et-Oise, Versailles (4) **1** 1948 pp. 5–6. [Hym.]

- 1200.—**Hardouin, R.** Un nid anomal d'*Osmia cornuta* Lin. Bull. Soc. Sci. nat. Seine-et-Oise, Versailles (4) 1 1948 pp. 49–50, 1 fig. [Hym.]
- 1201.—**Hardwick, D. F.** A study of the *rosaria* group of the genus *Diarsia* (Lepidoptera: Phalaenidae) with special reference to the structure of the male genitalia. Canad. Ent., Guelph 82 1950 pp. 25–33, 3 pls.
- 1202.—**Hardwick, D. F.** Preparation of slide mounts of Lepidopterous genitalia. Canad. Ent., Guelph 82 1950 pp. 231–235.
- 1203.—**Hardy, D. E.** Dorilaidae (Pipunculidae) (Diptera). Explor. Parc nat. Albert, Miss. de Witte (1933–1935), Brussels fasc. 62 1950 53 pp. 27 figs.
- 1204.—**Hardy, D. E.** Bibionidae (Diptera - Nematocera). Explor. Parc nat. Albert, Miss. de Witte (1933–1935) Brussels fasc. 65 1950 23 pp., 35 figs.
- 1205.—**Hardy, D. E.** A monographic study of the African Bibionidae (Diptera). Part I. Introduction and genus *Bibio* Geoffroy. J. Kans. ent. Soc., Manhattan 23 1950 pp. 137–153, 7 figs.
- 1206.—**Hardy, D. E.** *Homoneura* vs. *Sciomyza* in Hawaii (Diptera). Proc. Hawaii. ent. Soc., Honolulu 14 (1949) 1950 p. 73.
- 1207.—**Hardy, D. E.** Studies in Pacific Bibionidae (Diptera). Part I. Proc. Hawaii. ent. Soc., Honolulu 14 (1949) 1950 pp. 75–85, 9 figs.
- 1208.—**Hardy, D. E.** A new *Dacus* from Australia (Diptera: Tephritidae). Proc. Hawaii. ent. Soc., Honolulu 14 (1949) 1950 pp. 87–89, 1 fig.
- 1209.—**Hardy, D. E.** The periodical cicada, brood III, in Iowa. Proc. Iowa Acad. Sci., Des Moines 54 1947 pp. 311–315, 2 figs.
- 1210.—**Hardy, D. E.** Neotropical Dorilaidae studies. Part 2 (Pipunculidae, Diptera). Rev. Ent., Rio de Janeiro 21 1950 pp. 433–448, 9 figs.
- 1211.—**Hardy, D. E.** The Nearctic *Nomoneura* and *Nemomydas* (Diptera, Mydidae). Wasmann J. Biol., San Francisco 8 1950 pp. 9–37, 2 pls.
- 1212.—**Hardy, G. A.** Notes on, and additions to the Cerambycidae of Vancouver Island. Canad. Ent., Guelph 82 1950 pp. 85–86. [Col.]
- 1213.—**Hardy, G. H.** On the articulating scutellum in Diptera. Ent. mon. Mag., London 86 1950 p. 230.
- 1214.—**Hardy, G. H.** On the shortening of the radial vein in Diptera. Ent. mon. Mag., London 86 1950 p. 231, 1 fig.
- 1215.—**Hardy, G. H.** The twisting segments in Diptera. Ent. mon. Mag., London 86 1950 pp. 346–347.
- 1216.—**Harker, J. E.** Australian Ephemeroptera. Part 1. Taxonomy of New South Wales species and evaluation of taxonomic characters. Proc. Linn. Soc. New South Wales, Sydney 75 1950 pp. 1–34, 101 figs.
- 1217.—**Harker, J. E.** The effect of temperature on the final instar nymphs of three species of Australian Ephemeroptera. Proc. R. ent. Soc. London (A) 25 1950 pp. 111–114.
- 1218.—**Harman, A. C.** Cham-paran butterflies—North Bihar. J. Bombay nat. Hist. Soc. 49 1950 pp. 93–100. [Lep.]
- 1219.—**Harmston, F. C.** An annotated list of mosquito records from Colorado. Gt. Basin Nat., Provo 9 (1949) 1950 pp. 65–75. [Dipt.]
- 1220.—**Harnisch, O.** Vortäuschung von Feuerbrunst durch schwärzende Chironomiden. Arch. Hydrobiol., Stuttgart 43 1950 pp. 497–498. [Dipt.]
- 1221.—**Harnisch, O.** Zum anaeroben Glykogenabbau wirbelloser Tiere. Biol. Zbl., Leipzig 66 1947 pp. 179–185.
- 1222.—**Harnisch, O.** Die Eigenart der oxybiotischen Erholung nach Anaerobiose bei Chironomidenlarven. Biol. Zbl., Leipzig 69 1950 pp. 449–463. [Dipt.]
- 1223.—**Harnisch, O.** Zur Analyse der Oxybiose der Larve von *Chironomus bathophilus* K., einer Chironomide-Larve der Seentiefe. Zool. Anz., Leipzig 139 1942 pp. 1–12. [Dipt.]

1224.—**Harnisch, O.** Messungen zur Kennzeichnung des aeroben und anaeroben Stoffwechsels der Larve von *Chironomus bathophilus* K., einer *Chironomus*-Larve der Seentiefe. Zool. Anz., Leipzig **142** 1943 pp. 240–248. [Dipt.]

1225.—**Harnisch, O.** Einige Messungen zum Glykogengehalt und Glykogenstoffwechsel der Larve von *Chironomus bathophilus* K. Zool. Anz., Leipzig **145** 1950 pp. 301–305. [Dipt.]

1226.—**Harnisch, O.** Studien über die Oxybiose der Larve von *Chironomus (Camptochironomus) tentans* Fabr. Z. vergl. Physiol., Berlin **32** 1950 pp. 482–498. [Dipt.]

Harnly, M. H. see Goldsmith, Harnly & Tobias.

1227.—**Harper, G. W. & Waller, W. E.** Notes on breeding the first generation of *Polygona c-album*. Entomologist, London **83** 1950 pp. 145–148. [Lep.]

1228.—**Harrison, A. C.** Cape mayflies, Parts V–VIII. Piscator, Cape Town **4** 1950 pp. 19–23, 2 figs., 51–55, 2 figs., 80–81, 112–115. [Ephem.]

1229.—**Harrison, B. J. & Mather, K.** Polygenic variability in chromosomes of *Drosophila melanogaster* obtained from the wild. Heredity, London **4** 1950 pp. 295–312. [Dipt.]

1230.—**Harrison, J. W. H.** Observations on the ranges, habitats and variation of the Rhopalocera of the Outer Hebrides. Ent. mon. Mag., London **86** 1950 pp. 65–70. [Lep.]

1231.—**Harrison, J. W. H.** Lepidoptera in the Outer Hebrides in 1950. Entomologist, London **83** 1950 pp. 241–245.

1232.—**Harrison, J. W. H.** A dozen years' biogeographical researches in the inner and outer Hebrides. Proc. Univ. Durham phil. Soc. **10** 1950 pp. 516–524.

1233.—**Harrison, R. A.** Laboratory breeding of the housefly (*Musca domestica* L.). N.Z. J. Sci. Tech., Dunedin **30** (1949) 1950 pp. 243–247, 3 figs. [Dipt.]

1234.—**Hase, A.** Eine merkwürdige Ameisenfalle. Natur u. Volk, Frankfurt a. M. **80** 1950 pp. 350–351, 1 fig. [Hym.]

1235.—**Haskins, C. P. & E. F.** Note on the method of colony foundation of the Ponerine ant *Brachyponera (Euponera) lutea* Mayr. Psyche, Cambridge, Mass. **57** 1950 pp. 1–9. [Hym.]

1236.—**Hassan, A. A. G.** The classification and evolution of the spiracular system in insects. Bull. Soc. Fouad Ier Ent., Cairo **34** 1950 pp. 299–305, 5 figs.

1237.—**Hassenstein, B.** Wandernde geometrische Interferenzfiguren im Insektenauge. Naturwissenschaften, Berlin **37** 1950 pp. 45–46, 4 figs.

1238.—**Hassenstein, B.** Verhaltens-Physiologie am freischwebenden Insekt — Vorläufige Mitteilungen. Verh. dtsch. Zool. Kiel 1948, 1949 pp. 371–376, 3 figs.

1239.—**Hassett, C. C., Dethier, V. G. & Gans, J.** A comparison of nutritive values and taste thresholds of carbohydrates for the blowfly. Biol. Bull., Lancaster, Pa. **99** 1950 pp. 446–453. [Dipt.]

Hassett, C. C. see Jenkins & Hassett.

1240.—**Hatch, M. H.** Studies on the Coleoptera of the Pacific northwest. II: Carabidae: Bembidiini. Pan-Pacific. Ent., San Francisco **26** 1950 pp. 97–106.

1241.—**Haupt, H.** Pompilidae (Hymenoptera Sphecoidea). Explor. Parc nat. Albert, Miss. de Witte (1933–1935), Brussels fasc. 69 1950 63 pp. 25 figs.

1242.—**Hayashi, M.** On the genus *Epania* Pascoe from Japan (Col.; Cerambycidae). Ent. Rev. Japan, Osaka **5** 1950 pp. 1–5, 3 figs.

1243.—**Hayashi, M.** A new species of the genus *Xylotrechus* from Japan (Coleoptera: Cerambycidae). Trans. Kansai ent. Soc., Nishinomiya **15** 1950 pt. 2 pp. 25–27, 1 fig.

1244.—**Haydak, M. H. & Vivino, A. E.** The changes in the thiamine, riboflavin, niacin and pantothenic acid content in the food of female

honeybees during growth with a note on the vitamin K activity of royal jelly and bee bread. Ann. ent. Soc. Amer., Columbus **43** 1950 pp. 361-367.

1245.—**Hayward, K. J.** Satíridos argentinos nuevos para la ciencia (Lep. Satyridae). Acta zool. illoana Tucuman **8** 1949 pp. 151-159, 3 figs.

1246.—**Hayward, K. J.** Nuevas especies y formas de Riodinidae de Argentina y Bolivia (Lep. Rhop.). Acta zool. illoana, Tucuman **8** 1949 pp. 197-201, 1 fig.

1247.—**Hayward, K. J.** Nuevas especies de Lycaenidae de la Argentina (Lep. Rhop.). Acta zool. illoana, Tucuman **8** 1949 pp. 567-581, 7 figs.

1248.—**Hayward, K. J.** Un nuevo género para Nymphalidae. Rev. Soc. ent. argent., Buenos Aires **14** 1950 pp. 319-320. [Lep.]

1249.—**Hazeltine, W.** Observations in flights of *Pleocoma conjuncta* (Coleoptera : Scarabaeidae). Pan-Pacif. Ent., San Francisco **26** 1950 pp. 188-189.

1250.—**Hedges, A. V.** A note on the life-history of *Madopa salicalis*. Entomologist, London **83** 1950 pp. 97-98, 1 pl. [Lep.]

1251.—**Hedwig, K.** Beiträge zur Kenntnis europäischer Schlupfwespen. Nachr. Sammelst. Schmarotzerbestimm., Aschaffenburg 1950 no. 29 pp. 17-42. [Hym.]

1252.—**Hedwig, K.** Ichneumoniden der Umgebung von Würzburg. Nachr. Sammelst. Schmarotzerbestimm., Aschaffenburg 1950 no. 29 pp. 43-56. [Hym.]

1253.—**Heerdt, P. F. van.** On the distribution of certain Coleoptera living in the first range of dunes on the island of Terschelling (a preliminary note). Ent. Ber., Amsterdam **13** 1950 pp. 108-109, 1 fig.

1254.—**Heerdt, P. F. van.** A small grading temperature apparatus for entomological use. Nature, London **165** 1950 p. 323, 1 fig.

1255.—**Heerdt, P. F. van.** The temperature and humidity preferences of certain Coleoptera. Proc. K. ned. Akad. Wet. Amsterdam **53** 1950 pp. 347-360, 4 figs.

Heerdt, P. F. van see Kramer & Heerdt.

1256.—**Heikertinger, F.** Bestimmungstabellen europäischer Käfer. LXXXII. Fam. Chrysomelidae. 5. Subfam. Halticinae. 11.-30. Gattung: *Crepidodera*—Verwandtschaft weitesten Sinnes (Schluss). Koleopt. Rdsch., Vienna **31** (1945-1950) 1950 pp. 81-139, 34 figs.

1257.—**Heikertinger, F.** Nachträge zu den Bestimmungstabellen der Gattungen *Phyllotreta* und *Aphthona*. Koleopt. Rdsch., Vienna **31** (1945-1950) 1950 pp. 140-146. [Col.]

1258.—**Heikertinger, F.** Das Problem der "Totalzeichnung" auf den Schmetterlingsflügeln (Schluss). Z. wien. ent. Ges., Vienna **35** 1950 pp. 68-80, 4 figs. [Lep.]

1259.—**Heikertinger, F.** Was jeder Zoologe von den Nomenklaturfragen wissen soll. Zool. Anz., Leipzig **130** 1940 pp. 139-155.

Heim, R. see Grassé & Heim.

1260.—**Hein, G.** Ueber richtungsweisende Bienentänze bei Futterplätzen in Stocknähe. Experientia, Basle **6** 1950 pp. 142-144, 4 figs. [Hym.]

1261.—**Heinänen, V. L.** Altes und Neues über *Malacodes regelaria* Tgstr. (Lep., Geometridae). Ann. ent. fenn., Helsinki **16** 1950 pp. 188-200, 10 figs.

1262.—**Heinrich, G.** Eine neue Ichneumonide aus der Ukraine. Mitt. Sammelst. Schmarotzerbestim., Aschaffenburg Heft 27 1950 pp. 4-8. [Hym.]

1263.—**Heinrich, G.** Neue deutsche Ichneumoniden. Nachr. Sammelst. Schmarotzerbestim., Aschaffenburg Heft 28 1950 pp. 14-23. [Hym.]

Heinz, H. J. see Zumpt & Heinz.

1264.—**Heinze, K.** Die Ueberwinterung der grünen Pfirsichblattlaus *Myzodes persicae* (Sulz.) unter den deutschen Klimaverhältnissen. Verh. dtsch. Zool. Kiel 1948, 1949 pp. 283-289, 1 fig. [Hem.]

1265.—**Heizer, P.** The chromosome cytology of two species of the Pacific genus *Oechalia* (Pentatomidae, Hemiptera-Heteroptera), *O. patruelis* Stål, and *O. pacifica* Stål. J. Morph., Philadelphia **87** 1950 pp. 179–226, 153 figs.

1266.—**Hellén, W.** Some remarks on the Ichneumonid fauna of Iceland. Ent. Medd., Copenhagen **25** 1950 pp. 414–418. [Hym.]

1267.—**Hellén, W.** Zwei neue *Chilosia*-Arten (Dipt., Syrphidae) aus Ostfennoskandien. Notul. ent., Helsinki **29** (1949) 1950 pp. 90–91.

1268.—**Hellén, W.** Die Evaniiden Finnlands (Hym.). Notul. ent., Helsinki **30** 1950 pp. 1–5.

1269.—**Hellén, W.** Die Ichneumonidentypen F. W. Woldstedts. Notul. ent., Helsinki **30** 1950 pp. 26–31. [Hym.]

1270.—**Hellén, W.** Zur Kenntnis der Ophioninen-Gattungen *Barylypa* Först., *Labrorhynchus* Först. und *Agrypon* Först. Notul. ent., Helsinki **30** 1950 pp. 31–38. [Hym.]

1271.—**Heller, J., Karpiak, S. & Zubikowa, I.** Inorganic pyrophosphate in insect tissue. Nature, London **166** 1950 pp. 187–188.

1272.—**Hemming, A. F. & Berger, L. A.** Nouvelles règles de nomenclature. Application au cas *Colias hyale* et *Colias australis*. Lambillionea, Brussels **50** 1950 pp. 2–9. [Lep.]

1273.—**Hemming, F.** On Brigadier W. H. Evans' catalogue of the Hesperiidae from Europe, Asia and Australia in the British Museum (Natural History). Entomologist, London **83** 1950 pp. 84–87. [Lep.]

1274.—**Hemming, F.** A new chapter in zoological nomenclature: the reforms instituted by the Thirteenth International Congress of Zoology, Paris, July, 1948. Trans. Soc. Br. Ent., Bournemouth **10** 1950 pp. 209–216.

Henderson, J. M. see Rehn, Henderson & Serrano; Rehn, Maldonado Capriles & Henderson,

1275.—**Henke, K.** Ueber die verschiedenen Zellteilungsvorgänge in der Entwicklung des beschuppten Flügelepithels der Mehlmotte *Ephestia kuhniella* Z. Biol. Zbl., Leipzig **65** 1946 pp. 120–135, 6 figs. [Lep.]

1276.—**Hennig, W.** Grundzüge einer Theorie der phylogenetischen Systematik. Berlin, Deutscher Zentralverlag 1950 [7+] 370 pp. 58 figs.

Henrot, H. see Jeannel & Henrot.

1277.—**Henson, H.** On the head capsule and mouth parts of *Forficula auricularia* Linn. (Dermaptera). Proc. R. ent. Soc. London (A) **25** 1950 pp. 10–18, 2 figs.

1278.—**Henstock, H.** Experiments with a light trap at Caerwys, North Wales, during the years 1947, 1948 and 1949. Entomologist, London **83** 1950 pp. 175–188, 1 fig. 7 graphs.

1279.—**Heqvist, K. J.** Fjärilar från Vindelälvens dalgång inom Degerfors socken i Västerbottens län. Ent. Tidskr., Stockholm **71** 1950 pp. 33–42, 2 figs. [Lep.]

1280.—**Herfs, A.** Studien an dem Steinussborkenkäfer, *Coccotrypes tanganus* Eggers. H.-Briefe, Leverkusen **2** 1949 Heft 3 pp. 22–49, 22 figs.; **3** 1950 Heft 1 pp. 3–31, 24 figs. [Col.]

1281.—**Herget, C. M.** Reaction time of the common housefly (*Musca domestica*). Science, Lancaster Pa. **112** 1950 p. 62. [Dipt.]

1282.—**Hering, E. M.** Beitrag zur Kenntnis der Gattung *Hydrellia* (Dipt. Ephyr.). Arch. Hydrobiol., Stuttgart **43** 1950 pp. 234–240, 3 figs.

1283.—**Hering, E. M.** Monophagie und Xenophobie. Die Nahrungswahl phytophager Insekten und die geographische Herkunft ihrer Wirtspflanzen. Naturwissenschaften, Berlin **37** 1950 pp. 531–536.

1284.—**Hering, E. M.** Die Oligophagie phytophager Insekten als Hinweis auf eine Verwandtschaft der Rosaceae mit den Familien der Amentiferae. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 74–79.

Herkenham, N. B. see Ferrel, Twining & Herkenham,

- 1285.—**Herms, W. B.** Medical entomology with special reference to the health and well-being of man and animals. New York, Macmillan Co. 1950 4th ed. xvi & 643 pp. 1 frontisp. 191 figs.
- 1286.—**Herring, J. L.** The aquatic and semiaquatic Hemiptera of northern Florida. Part 1: Gerridae. Florida Ent., Gainesville **33** 1950 pp. 23–32, 1 fig.
- Herring, J. L.** see Hussey & Herring.
- 1287.—**Herrström, G.** Apidologiska notiser. Två för Sverige nya biarter. Opusc. ent., Lund **15** 1950 pp. 191–192. [Hym.]
- 1288.—**Herskowitz, I. H.** An estimate of the number of loci in the X chromosome of *Drosophila melanogaster*. Amer. Nat., Lancaster, Pa. **84** 1950 pp. 255–260. [Dipt.]
- 1289.—**Herter, K.** Die Beziehungen zwischen der Oekologie und der Thermotaxis der Tiere. Biol. gen., Vienna **17** 1943 pp. 243–309, 3 figs.
- 1290.—**Hertig, M.** The type of *Phlebotomus mascittii* Grassi (Diptera, Psychodidae). Bull. ent. Res., London **40** 1950 pp. 453–457, 3 figs.
- 1291.—**Hertig, M. & Fairchild, G. B.** Notes on the *Phlebotomus* of Panama. V. The second sternite as a taxonomic character (Diptera, Psychodidae). Proc. ent. Soc. Washington **52** 1950 pp. 91–95, 1 pl.
- 1292.—**Hervé, P.** Sur les espèces du genre *Raymondionymus* Woll. dans les départements du Var et des Alpes-Maritimes (note complémentaire). Rev. franç. Ent., Paris **17** 1950 pp. 34–37, 1 fig. [Col.]
- Heslop Harrison** see Harrison.
- 1293.—**Heyrovský, L.** Deuxième contribution à la connaissance des Longicornes de la Palestine (Col. Ceramb.). [In Czech with French summary.] Acta Soc. ent. Čsl., Prague **47** 1950 pp. 14–15.
- 1294.—**Heyrovský, L.** Deux Priognides nouveaux de l'Asie (Col., Ceramb.). Acta Soc. ent. Čsl., Prague **47** 1950 pp. 127–129.
- 1295.—**Hickin, N. E.** Larvae of the British Trichoptera. 28–31. Proc. R. ent. Soc. London (A) **25** 1950 pp. 67–70, 12 figs., 71–74, 8 figs., 103–106, 9 figs., 107–110, 11 figs.
- 1296.—**Hidaka, T.** Note écologique sur les *Catops* du Japon. Rev. franç. Ent., Paris **17** 1950 pp. 33–34. [Col.]
- 1297.—**Hierholzer, O.** Ein Beitrag zur Frage der Orientierung von *Ips curvidens* Germ. Z. Tierpsychol., Berlin **7** 1950 pp. 588–620, 21 figs. [Col.]
- 1298.—**Higgins, L. G.** The "Zoophylacium gronovianum," 1781, and Meuschen's index. J. Soc. Bibliogr. nat. Hist., London **2** 1950 pp. 185–186.
- 1299.—**Higgins, L. G.** A descriptive catalogue of the Palaearctic *Euphydryas* (Lepidoptera: Rhopalocera). Trans. R. ent. Soc. London **101** 1950 pp. 435–489, 7 maps, 44 figs.
- Hightower, B. G.** see Eads & Hightower.
- 1300.—**Hille, J. C. van.** Note on *Formicomus caeruleus* Thunb. with description of two new African species (Anthicidae, Coleoptera, Heteromera). J. ent. Soc. sthn Africa, Pretoria **13** 1950 pp. 68–72, 11 figs.
- 1301.—**Hille, J. C. van.** The position of *Anthicus quadrillum* Laf. (Coleoptera Heteromera) and related species in southern and eastern Africa. Proc. R. ent. Soc. London (B) **19** 1950 pp. 21–25, 4 figs.
- 1302.—**Hille Ris Lambers, D.** On mounting Aphids and other soft-skinned insects. Ent. Ber., Amsterdam **13** 1950 pp. 55–58.
- 1303.—**Hille Ris Lambers, D.** Neue Blattläuse aus der Schweiz (III) (Homopt., Aphidae). Mitt. schweiz. ent. Ges., Berne **23** 1950 pp. 37–46, 4 figs.
- 1304.—**Hille Ris Lambers, D.** Hostplants and Aphid classification. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 141–144. [Hem.]

1305.—**Hille Ris Lambers**, D. An apparently unrecorded mode of reproduction in Aphididae. Proc. 8th int. Congr. ent. Stockholm 1948, 1950 p. 235. [Hem.]

1306.—**Hille Ris Lambers**, D. De Nederlandse bladluizen van framboos en braam. Tijdschr. PlZiekt. Wageningen **56** 1950 pp. 253–261, 4 figs. [Hem.]

1307.—**Hincks**, W. D. Rhysodidae. Coleopt. Catal. (Suppl.), 's-Gravenhage pars I (2nd ed.) 1950 18 pp.

1308.—**Hincks**, W. D. Some nomenclatorial notes on Chrysomelidae (Col.). No. 2, Galerucinae; corrections and additions. No. 3, Cassidinae. Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 86–88, 506–512.

1309.—**Hincks**, W. D. Supplementary notes on Mauritian earwigs (Dermaptera). Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 353–357, 3 figs.

1310.—**Hincks**, W. D. Systematic and faunistic notes on American Passalidae (Col.). Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 1033–1047, 5 figs.

1311.—**Hincks**, W. D. The Spaeth collection of Cassidinae (Col., Chrysomelidae). Ent. mon. Mag., London **86** 1950 pp. 144–146.

1312.—**Hincks**, W. D. Some Dermaptera from Kilimanjaro, Tanganyika. Ent. mon. Mag., London **86** 1950 pp. 179–181, 5 figs.

1313.—**Hincks**, W. D. A new species of *Aspicela* Clark (Col., Chrysom., Halticinae) from Bolivia and Peru. Ent. mon. Mag., London **86** 1950 pp. 265–266.

1314.—**Hincks**, W. D. The British species of the genera *Pyrhulta* Joannis and *Galerucella* Crotch (Col., Chrysomelidae). J. Soc. Brit. Ent., Bournemouth **3** 1950 pp. 150–156, 9 figs.

1315.—**Hincks**, W. D. Notes on some British Mymaridae (Hym.). Trans. Soc. Brit. Ent., Bournemouth **10** 1950 pp. 167–207, 5 figs.

Hine, D. J. see Southwood & Hine.

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1316.—**Hinton**, C. W. & **Whittinghill**, M. The distribution of X-rayed induced crossovers from curly inversion heterozygotes of *Drosophila melanogaster* females. Proc. nat. Acad. Sci. U.S.A., Washington **36** 1950 pp. 552–558. [Hym.]

Hinton, C. W. see Whittinghill & Hinton.

1317.—**Hinton**, H. E. Aquatic Diptera collected in the river Dove near Dovedale, Derbyshire. J. Soc. Brit. Ent., Bournemouth **3** 1950 pp. 203–206, 2 figs.

1318.—**Hinton**, H. E. A Trichopterous larva with a chelate front leg. Proc. R. ent. Soc. London (A) **25** 1950 pp. 62–65, 3 figs.

1319.—**Hinton**, T. A correlation of phenotypic changes and chromosomal rearrangements at the two ends of an inversion. Genetics, Menasha **35** 1950 pp. 188–205, 2 figs. [Dipt.]

1320.—**Hinton**, T. & **Goodsmith**, W. An analysis of phenotypic reversions at the brown locus in *Drosophila*. J. exp. Zool., Philadelphia **114** 1950 pp. 103–114. [Dipt.]

Hirashima, Y. see Yasumatsu & Hirashima.

1321.—**Hirata**, Y., **Nakanishi**, K. & **Kikkawa**, H. Xanthopterin obtained from the skins of the yellow mutant of *Bombyx mori* (silkworm). Science, Lancaster, Pa. **111** 1950 pp. 608–609. [Lep.]

1322.—**Hirata**, Y., **Nakanishi**, K. & **Kikkawa**, H. Crystalline + chromogen obtained from *Bombyx mori*. Science, Lancaster, Pa. **112** 1950 pp. 307–308, 2 figs. [Lep.]

1323.—**Hislop**, J. A. Butterflies of Ophir. Malayan Nature J., Singapore **5** 1950 pp. 9–16, 1 pl. [Lep.]

1324.—**Hobbs**, K. R. Notes on the classification of *Torymus* with the biology and description of a new species (Hymenoptera : Torymidae). Pan-Pacif. Ent., San Francisco **26** 1950 pp. 173–178, 11 figs.

- 1325.—**Hoberlandt**, L. Semiaquatic Heteroptera collected in Lunda, North East Angola (Portuguese West Africa) by Dr. A. de Barros Machado in 1946–1949. Publ. Serv. Cult. Mus. Dundo, Companhia Diamantes Angola, Lisbon 1950 49 pp. 164 figs.
- 1326.—**Hocking**, B., **Richards**, W. R. & **Twinn**, C. R. Observations on the bionomics of some northern mosquito species (Culicidae: Diptera). Canad. J. Res., Ottawa (D) 28 1950 pp. 58–80, 2 pls. 7 figs.
- Hodgkin**, E. P. see Reid & Hodgkin.
- Hodson**, A. C. see Chiang & Hodson.
- Hoegaerden** see Van Hoegaerden.
- 1327.—**Hoepli**, R. & **Ch'iang**, I-hung. Parasites in Chinese and early Western medicine—a comparison. Peking nat. Hist. Bull. 18 1950 pp. 207–243.
- 1328.—**Hofeneder**, K. Ueber einige Strepsipteren [concl.]. Brotéria, Lisbon (Ci. nat.) 46 1950 pp. 80–96. [Col.]
- 1329.—**Hofeneder**, K. Fächerflügler (Strepsiptera) als nächtliche Flieger am Licht. Nachr. Sammelst. Schmarotzerbestim., Aschaffenburg Heft 28 1950 pp. 8–13. [Col.]
- 1330.—**Hoffmann**, A. Curculionides marocains inédits ou peu connus. Bull. Soc. ent. France, Paris 55 1950 pp. 83–93, 19 figs.
- 1331.—**Hoffmann**, A. Coléoptères Curculionides (première partie). Faune de France 52 1950 486 pp. 225 figs. Paris, Lechevalier.
- 1332.—**Hoffmann**, A. Descriptions et observations concernant divers Coléoptères phytophages de la région paléarctique. Rev. franç. Ent., Paris 17 1950 pp. 192–199, 4 figs.
- 1333.—**Hoffmann**, E. Geschichtliches über die Verbreitung von *Erebia arete* Fabr. mit einigen Neubeschreibungen. Wien. ent. Rdsch. (Ent. NachrBl. öst. schweiz. Ent.) Vienna 2 1950 pp. 18–20, 28–31, 55–57. [Lep.]
- 1334.—**Hoffmann**, E. Verzeichnis der von Herrn Johann Praniess † aus der Gegend von Abtenau in Salzburg gesammelten Macrolepidopteren. Z. wien. ent. Ges., Vienna 35 1950 pp. 25–33, 1 fig.
- 1335.—**Hoffmann**, W. E. Second supplement to catalogue of Scutelleroidea. Lingnan Sci. J., Canton 23 1950 pp. 21–42. [Hem.]
- 1336.—**Hoffmeyer**, S. Problems in Danish Macrolepidoptera. Entomologist, London 83 1950 pp. 193–198.
- 1337.—**Höglund**, G. Spinnkörtelsystemets uppgift och funktion samt dess korrelation till hudens och tarmens utveckling hos *Caliroa* (Hym.). [With German summary.] Notul. ent., Helsinki 30 1950 pp. 57–77, 5 pls.
- Höhne**, G. see Dittrich, Höhne, Paul & Schubert.
- 1338.—**Holdhaus**, K. Eine neue Rasse von *Trechus longulus* Dan. aus den südlichen Dolomiten (Coleoptera: Carabidae). Mem. Soc. ent. ital., Genova 29 1950 p. 104.
- 1339.—**Holgersen**, H. Nye og gamle funn av rettvinger (Orthoptera) i Rogaland. Stavanger Mus. Årbok 59 (1949) 1950 pp. 93–95.
- Hollaender**, A. see Carlson & Hollaender.
- 1340.—**Holland**, G. P. Notes on *Megabothris asio* (Baker) and *M. calcarifer* (Wagner) with the description of a new subspecies (Siphonaptera: Ceratophyllidae). Canad. Ent., Guelph 82 1950 pp. 126–133, 8 figs.
- 1341.—**Holland**, G. P. Notes on some British Columbian fleas, with remarks on their relationship and distribution. Proc. ent. Soc. B.C., Kamloops, B.C. 46 1950 pp. 5–13. [Siphonapt.]
- 1342.—**Holland**, G. P. & **Jameson**, Jr., E. W. Notes on some Nearctopsyllinae, with descriptions of two new species of *Nearctopsylla* from California (Siphonaptera). Canad. Ent., Guelph 81 (1949) 1950 pp. 249–253, 7 figs.
- 1343.—**Hölldobler**, K. Weitere Mitteilungen über die Ameisenfauna Nordostkareliens: IV. Ueber die Koloniengründung von *Camponotus herculeanus*. Z. angew. Ent., Berlin 31 1950 pp. 583–590. [Hym.]

1344.—Hölldobler, K. Neue Beobachtungen über die Koloniengründung der Ameisen und Stellungnahme zum Eidmannschen Schema. Z. angew. Ent., Berlin **32** 1950 pp. 279–284. [Hym.]

1345.—Holmes, J. W. O. A pale variety of *Lycaena phlaeas* of genetic origin, and the effect of light thereon. Entomologist, London **83** 1950 pp. 90–91. [Lep.]

1346.—Holst, E. von & Mittelstaedt, H. Das Reafferenzprinzip. (Wechselwirkungen zwischen Zentralnervensystem und Peripherie.) Naturwissenschaften, Berlin **37** 1950 pp. 464–476, 14 figs.

1347.—Holstein, M. Guide pratique de l'anophelisme en A.O.F. Dir. gén. Santé publ. A.O.F., Dakar 1949 55 pp. 10 pls. [Dipt.]

1348.—Hölzel, E. Die *Carabus creutzeri*-Fabr.—Rassenkette in Kärnten und Osttirol. Carinthia II, Klagenfurt **139–140** 1950 pp. 134–162, 6 figs. 1 fldg. map. [Col.]

1349.—Hood, J. D. Thrips that "talk". Proc. ent. Soc. Washington **52** 1950 pp. 42–43, 4 figs. [Thysanopt.]

1350.—Hood, J. D. Brasilian Thysanoptera. II. Rev. Ent., Rio de Janeiro **21** 1950 pp. 1–113, 15 pls.

Hopkins, B. A. see Way & Hopkins.

1351.—Hopkins, G. H. E. Stray notes on Mallophaga—X. Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 230–242.

1352.—Hopkins, G. H. E. The type species of *Trichopsylla* Kolenati: a further note. Entomologist, London **83** 1950 pp. 31–33. [Siphonapt.]

1353.—Hopkins, G. H. E. The identity of two species described by Kolenati in 1859. Entomologist, London **83** 1950 pp. 162–163. [Siphonapt.]

1354.—Hopkins, G. H. E. An awkward problem in flea nomenclature. Entomologist, London **83** 1950 pp. 201–202. [Siphonapt.]

Hopkins, G. H. E. see Clay & Hopkins.

1355.—Hori, K. Morphological studies on Muscoid flies of medical importance in Japan. II. On the Japanese species of the genus *Calliphora* and its allies and on some common species of *Lucilia* from Tokyo. [In Japanese with English summary.] Misc. Rep. res. Inst. nat. Resources, Tokyo no. 16 1950 pp. 11–23, 10 figs. [Dipt.]

1356.—Horion, A. Käferkunde für Naturfreunde. Frankfurt 1949 xv & 292 pp. 21 pls. 1 col. frontisp. 169 figs. [Col.]

1357.—Horion, A. Faunistik der Mittel-Europäischen Käfer. Band II. Frankfurt 1949 xxiii & 388 pp. [Col.]

1358.—Horion, A. Diskontinuierliche Ost-West-Verbreitung mittel-europäischer Käfer. Proc. 8th int. Congr. Stockholm 1948, 1950 pp. 408–417, 20 maps. [Col.]

Hosino, Y. see Komai, Chino & Hosino.

1359.—Hospital, D. Nuevas formas de lepidópteros ibéricos. Trab. Mus. Cienc. nat. Barcelona (N.S. Zool.) **1** 1948 no. 2 pp. 11–14.

1360.—Hottes, F. C. A long lost *Aphis* species (Homoptera: Aphididae). Pan-Pacif. Ent., San Francisco **26** 1950 pp. 93–94.

Hottes, F. C. see Drake & Hottes.

1361.—Hovanitz, W. Ecological segregation of inter fertile species of *Colias*. Ecology, Durham, N.C. **29** 1948 pp. 461–469, 1 fig. [Lep.]

1362.—Hovanitz, W. The biology of *Colias* butterflies. I, II. Wasmann J. Biol., San Francisco **8** 1950 pp. 49–75, 8 figs., 197–219, 6 figs. [Lep.]

1363.—Howarth, T. G. Notes on the life history of *Margaronia unionalis* Hbn. Ent. Gaz., London **1** 1950 pp. 87–88. [Lep.]

1364.—Howe, R. W. Studies on beetles of the family Ptinidae. 4. Ent. mon. Mag., London **86** 1950 pp. 325–326. [Col.]

1365.—Hoyt, C. On a peculiar morphological development in the Psychodidae (Insecta: Diptera). Microentomology, Stanford Univ. **15** 1950 pp. 140–146, 4 figs.

1366.—**Hrbáček, J.** On the morphology and function of the antennae of the Central European Hydrophilidae (Coleoptera). Trans. R. ent. Soc. London **101** 1950 pp. 239–256, 17 figs.

Hsu, T. C. see Spieth & Hsu.

Huang, T. C. see Chow & Huang.

1367.—**Hubbard, C. A.** Fleas of the state of Nevada. Bull. S. Calif. Acad. Sci., Los Angeles **48** (1949) 1950 pp. 115–128, 2 figs. [Siphonapt.]

1368.—**Hubbard, C. A.** A pictorial review of the North American chipmunk fleas. Ent. News, Lancaster, Pa. **60** (1949) 1950 pp. 253–261, 1 fig. [Siphonapt.]

1369.—**Huber, W. & Haasser, C.** Electron-microscope study of the peritrophic membrane in *Dixippus morosus*. Nature, London **165** 1950 p. 397, 3 figs. [Orth.]

1370.—**Huckett, H. C.** The genus *Paraprosalpia* (Villeneuve) in North America (= *Prosalpia* Pokorný preoc.) Muscidae. Bull. Brooklyn ent. Soc., Lancaster, Pa. **45** 1950 pp. 121–132, 133–143, 1 pl. [Dipt.]

1371.—**Huggins, H. C.** Migrant Lepidoptera in 1949. Entomologist, London **83** 1950 pp. 88–89.

1372.—**Hughes-Schrader, S.** The chromosomes of Mantids (Orthoptera : Mantidae) in relation to taxonomy. Chromosoma, Berlin **4** 1950 pp. 1–55, 47 figs.

1373.—**Hull, F. M.** Studies upon Syrphid flies in the British Museum (Natural History). Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 603–624. [Dipt.]

1374.—**Hull, F. M.** New species of New World *Volucella*. Bull. Brooklyn ent. Soc., Lancaster, Pa. **45** 1950 pp. 65–71. [Dipt.]

1375.—**Hull, F. M.** Some unusual Syrphid flies. Ent. News, Lancaster, Pa. **60** (1949) 1950 pp. 225–234. [Dipt.]

1376.—**Hull, F. M.** New South American Syrphid flies. Rev. Ent., Rio de Janeiro **21** 1950 pp. 225–236. [Dipt.]

1377.—**Hull, F. M. & Fluke, jr., C. L.** The genus *Cheilosia* Meigen (Diptera, Syrphidae) and the subgenus *Cheilosia* and *Hiatomyia*. Bull. Amer. Mus. nat. Hist., New York **94** 1950 pp. 301–341, 173 figs. 1 map 1 diagr.

1378.—**Humbel, E.** Ergebnisse aus der Kreuzung parthenogenetischer und zweigeschlechtlicher Schmetterlinge. IX. Rev. suisse Zool., Geneva **57** 1950 pp. 155–235, 20 figs. [Lep.]

1379.—**Humes, A. G.** Larval Coleoptera and Diptera from marine Crustaceans. Ecology, Durham, N.C. **29** 1948 pp. 392–393.

1380.—**Hungerford, H. B.** Two new generic names. J. Kansas ent. Soc., Manhattan **23** 1950 p. 73. [Hem.]

Huntington, E. I. see Comstock & Huntington.

1381.—**Hurd, jr., P. D.** Nomenclatorial notes on the genus *Pepsis* (Hymenoptera : Pompilidae). Pan-Pacif. Ent., San Francisco **26** 1950 pp. 132–133.

1382.—**Hurd, jr., P. D. & Linsley, E. G.** Some insects associated with nests of *Dianthidium dubium dilectum* Timberlake, with a list of the recorded parasites and inquilines of *Dianthidium* in North America. J. New York ent. Soc., Lancaster, Pa. **58** 1950 pp. 247–250. [Hym.]

1383.—**Hurst, H.** An electron diffraction study of the crystalline structure of the lipids in the pupal exuviae of *Calliphora erythrocephala*. J. exp. Biol., London **27** 1950 pp. 238–252, 3 pls. 1 fig. [Dipt.]

Husain see Afzal Husain.

1384.—**Hussey, R. F.** Two synonymous notes (Hemiptera : Coreidae, Corixidae). Ent. News, Lancaster, Pa. **61** 1950 pp. 12–13.

1385.—**Hussey, R. F. & Herring, J. L.** A remarkable new Belostomatid (Hemiptera) from Florida and Georgia. Florida Ent., Gainesville **33** 1950 pp. 84–89, 2 figs.

1386.—**Hussey, R. F. & Herring, J. L.** A new *Microvelia* from Florida (Hemiptera, Veliidae). Florida Ent., Gainesville **33** 1950 pp. 117–120,

1387.—**Husson**, R. Diptères des galeries de mines de France. *Publ. Mus. Hist. nat.*, Paris no. 8 1947 pp. 37–52.

1388.—**Hustache**, A. Nouveaux Barinae Sud Américains 1ère–3ème parties. *Bol. Mus. nac. Rio de Janeiro (Zool.)* 1949 no. 95, 55 pp.; no. 97, 143 pp. [Col.]

1389.—**Huzimatu**, K. The life history of a new Cynipid fly, *Kleidotoma japonica*, n. sp. *Sci. Rep. Tōhoku Univ. Sendai (4) Biol.* **15** 1940 pp. 457–480, 5 pls. 11 figs. [Hym.]

1390.—**Iablokoff**, A. K. Sur les particularités de la faune de la région de Saint-Guilhem-le-Désert. *Bull. Soc. ent. France*, Paris **55** 1950 pp. 102–112, 3 maps.

1391.—**Iablokoff**, A. K. Quelques méthodes de mesures écologiques. Entomologiste, Paris **5** (1949) 1950 pp. 169–175, 1 chart.

1392.—**Iablokoff**, A. K. Sur l'éthologie de deux Cérambycides xylophages du Massif du Pelvoux (Hautes-Alpes). *Vie et Milieu*, Paris **1** 1950 pp. 326–344, 1 fldg. table. [Col.]

1393.—**Iga**, M. On the genus *Stigmatium* Gray (1832) of Japan, with description of a new species (Coleoptera : Cleridae). *Ent. Rev. Japan* **1** 1949 pp. 36–38, 2 figs.

1394.—**Iga**, M. On the genus *Teneroides* Gahan (1910) from Japan (Coleoptera : Cleridae). [In Japanese with English summary.] *Ent. Rev. Japan*, Osaka **5** 1950 pp. 31–34, 2 figs.

1395.—**Inagaki**, K. The seasonal fluctuation of the local distributions of *Epilachna sparsa orientalis* Dieke and *Epilachna niponica* Lewis. [In Japanese with English summary.] *Trans. Kansai ent. Soc., Nishinomiya* **15** 1950 pp. 59–62.

1396.—**Invrea**, F. Nuove forme di *Apterogyna* (Hymenoptera-Apterogynidae). *Doriana, Genoa* **1** 1950 no. 6, 8 pp. 3 figs.

1397.—**Invrea**, F. Mutilidi nuovi o notevoli del bacino mediterraneo (Hymenoptera-Mutilidae). *Mem. Soc. ent. ital., Genova* **29** 1950 pp. 19–27.

1398.—**Iriarte**, D. R. Contribución al estudio de las Ceratopogoninas hematófagos señaladas en Venezuela. *Bol. Lab. Clin. "Luis Razetti"*, Caracas **15** 1950 pp. 344–413, 13 pls. [Dipt.]

1399.—**Irwin**, R. L. B., **Spinks**, J. W. T. & **Arnason**, T. J. Deposition of P^{32} in developing *Drosophila*. *Canad. J. Res.*, Ottawa **28** (D) 1950 pp. 137–142, 16 figs. [Dipt.]

1400.—**Ishihara**, T. Some notes on the Chinese species of the genus *Acanthosoma* Curtis, 1824 (Hemiptera : Pentatomidae). *Insecta matsum.*, Sapporo **17** 1950 pp. 81–84, 2 figs.

1401.—**Ishihara**, T. Revision of the Araeopidae of Japan, Ryukyu Islands and Formosa (Hemiptera). *Sci. Rep. Matsuyama agric. Coll. no. 2* 1949 102 pp. 17 pls.

1402.—**Ishihara**, T. Some notes on the eggs of three *Parnassius* butterflies (Papilionidae). *Trans. Kansai ent. Soc., Nishinomiya* **15** 1950 pp. 23–26, 2 figs. [Lep.]

1403.—**Ishihara**, T. The developmental stages of some bugs injurious to the kidney bean (Hemiptera). *Trans. Shikoku ent. Soc.* **1** 1950 pp. 17–31, 2 pls. 2 figs.

Ishihara, T. see Esaki & Ishihara.

1404.—**Issekutz**, L. *Chamaesphecia hungarica* Tomala : bona species (Lepidopt.). *Folia ent. hung.*, Budapest (N.S.) **3** 1950 pp. 49–55, 8 figs.

1405.—**Ives**, P. T. The importance of mutation rate genes in evolution. *Evolution, Lancaster, Pa.* **4** 1950 pp. 236–252. [Dipt.]

1406.—**Iwata**, K. Biology of *Goniozus japonicus* Ashmead, a parasite of the persimmon leaf-roller *Dichocrocis chlorophaanta* Butler. *Tech. Bull. Kagawa-ken agric. Coll.* **1** 1949 pp. 58–60, 2 figs. [Hym., Lep.]

1407.—**Iwata**, K. Hypothetic habit-type trees of the Aculeate Hymenoptera. [In Japanese with English summary.] *Tech. Bull. Kagawa-ken agric. Coll.* **1** no. **3** 1950 pp. 75–81.

1408.—**Iwata**, K. Preliminary observation on entomophagous Hymenoptera in Kagawaprefecture. [In Japanese with English summary.] Tech. Bull. Kagawa-ken agric. Coll. **2** 1950 pp. 69–70.

1409.—**Iwata**, K. Biology of Ichneumon parasites on bag-worms in Japan, I. Trans. Kansai ent. Soc., Nishinomiya **15** 1950 pp. 35–47, 5 figs. [Hym., Lep.]

1410.—**Izzard**, R. J. A macropterous female of *Myrmoplasma potteri* Martin: Hemiptera (Pyrhocoridae). Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 192–194, 1 fig.

1411.—**Jackson**, C. H. N. Wet season fraying of wings of tsetseflies, *Glossina morsitans*. Bull. ent. Res., London **41** 1950 pp. 159–160. [Dipt.]

1412.—**Jackson**, D. J. *Noterus clavicornis* Degeer and *N. capricornis* Herbst (Col., Dytiscidae) in Fife. Ent. mon. Mag., London **86** 1950 pp. 39–43, 2 figs.

Jackson, T. H. E. see Carpenter & Jackson.

1413.—**Jacobs**, S. N. A. The British Oecophoridae (part 1) and allied genera. Trans. S. Lond. ent. nat. Hist. Soc. **1948–49** 1950 pp. 123–141. 1 col. pl.

1414.—**Jacobs**, W. Ueber den Weibchen-Gesang bei Feldheuschrecken. Verh. dtsch. Zool. Mainz 1949, Leipzig 1950 pp. 238–244, 2 figs. [Orth.]

1415.—**Jacobs**, W. Vergleichende Verhaltensstudien an Feldheuschrecken. Z. Tierpsychol., Berlin **7** 1950 pp. 169–216, 25 figs.; also in Verh. dtsch. Zool. Kiel 1948, 1949 pp. 257–262, 1 fig.

1416.—**Jaczewski**, T. Notes on Corixidae XXIV–XXVIII. Polsk. Pismo ent., Wrocław **19** (1949) 1950 pp. 103–113, 4 figs. [Hem.]

1417.—**Jahn**, E. Bodentieruntersuchungen in den Flugsandgebieten des Marchfeldes (Untersuchungen über die Bevölkerungsdichte von Bodentieren in Düne und verschiedenen alten Beständen der ersten Waldgeneration). Z. angew. Ent., Berlin **32** 1950 pp. 208–274, 10 figs.

1418.—**Jakubski**, A. W. The first Margarodine (tribe Margarodini) Coccid from Australia. Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 397–413, 19 figs.

1419.—**James**, M. T. The genus *Scopeuma* in the western United States and southwestern Canada (Diptera, Scopeumatidae). Ann. ent. Soc. Amer., Columbus **43** 1950 pp. 343–353.

1420.—**James**, M. T. Some new and poorly-known Adoxomyiinae (Diptera, Stratiomyidae) from the Southwest. J. Kansas ent. Soc., Manhattan **23** 1950 pp. 71–73.

1421.—**James**, M. T. The Stratiomyidae (Diptera) of New Caledonia and the New Hebrides with notes on the Solomon Islands forms. J. Wash. Acad. Sci., Baltimore **40** 1950 pp. 248–260, 1 fig.

1422.—**James**, M. T. The Diptera collected on the Cockerell and Hubbell Expeditions to Honduras. Part I: Stratiomyidae, Tabanidae, and Aceroceratidae. Pan-Pacif. Ent., San Francisco **26** 1950 pp. 86–90, 1 fig.

1423.—**James**, M. T. Some Stratiomyidae (Diptera) from Okinawa and Guam. Pacific Sci., Honolulu **4** 1950 pp. 184–187.

1424.—**James**, M. T. A new Stratiomyid from Madagascar (Diptera). Proc. ent. Soc. Washington **52** 1950 pp. 100–101.

1425.—**James**, M. T. A new *Damarmomyia*, and the larva of *D. tasmanica* Kertesz (Diptera, Stratiomyidae). Proc. ent. Soc. Washington **52** 1950 pp. 312–315, 2 figs.

1426.—**Jameson**, jr., E. W. *Catalagia mathesonii*, a new Hystrichopsyllid flea (Siphonaptera) from California. J. Kansas ent. Soc., Manhattan **23** 1950 pp. 94–96, 6 figs.

Jameson, jr., E. W. see Holland & Jameson.

1427.—**Janetschek**, H. Beitrag zur Kenntnis der Gattung *Machilis* (Thysanura). Z. wien. ent. Ges., Vienna **35** 1950 pp. 125–132, 1 pl. 16 figs.

1428.—Janetschek, H. Alpine Funde zweier Kleinhymenopteren (Chalcidoidea). Z. wien. ent. Ges., Vienna **35** 1950 p. 133.

1429.—Janjua, N. A. The biology of *Dacus (Strumeta) ferrugineus* (Fab.) (Tryptidae : Diptera) in Baluchistan. Indian J. Ent., New Delhi **10** (1948) 1950 pp. 55–61.

1430.—Janmoule, E. Les papillons aquatiques. Nat. belges, Brussels **31** 1950 pp. 107–116, 1 fig. [Lep.]

1431.—Janmoule, E. Les papillons à "plumes". Nat. belges, Brussels **31** 1950 pp. 127–128, 3 figs. [Lep.]

1432.—Jannone, G. Vita di scienziato (biografia di Filippo Silvestri). Genoa, The author & Pisa, Ist. ent. agr. Univ. 1950 199 pp. 16 pls.

1433.—Jannone, G. Studi e ricerche di entomologia agraria in Eritrea e in Etiopia. VII. Reperti biologici e morfologici nuovi o poco noti su di un importante parassita delle cavallette: *Stomorrhina (Idia) lunata* Fab. (Diptera, Calliphoridae). Boll. Lab. Ent. agr. Portici **9** 1950 pp. 140–186, 10 figs.

1434.—Jannone, G. Casistica di alcune singolari anomalie morfologiche in Ortotteri e Mantoidea (Insecta). Boll. Lab. Ent. agr. Portici **9** 1950 pp. 187–242, 1 pl. 12 figs.

1435.—Jannone, G. Osservazioni sull'organo di Brunner in dieci specie di Ortotteri Acridoidei (Insecta). Riv. Biol. Perugia (N.S.) **42** 1950 pp. 81–92, 3 figs.

1436.—Janse, A. J. T. The moths of South Africa. Gelechiidae. Pretoria, Transvaal Mus. **5** 1950 pt. 2 pp. 61–172, pls. 33–88. [Lep.]

1437.—Janssens, A. Contribution à l'étude des coléoptères lamellicornes de la faune belge. Bull. Inst. Sci. nat. Belg., Brussels **26** 1950 no. 14, 11 pp., 1 fig.

1438.—Janssens, A. Contribution à l'étude des coléoptères lamellicornes. Bull. Inst. Sci. nat. Belg., Brussels **26** 1950 no. 32, 4 pp., 6 figs.

1439.—Janssens, E. Une nouvelle espèce de Coléoptère (Paussidae) africain: *Paussus dichrous* n. sp. Bull. Inst. Sci. nat. Belg., Brussels **26** 1950 no. 8, 4 pp., 1 fig.

1440.—Janssens, E. *Paussus saharae* Bedel = *P. verticalis* Reiche (Coleoptera, Paussidae). Bull. Inst. Sci. nat. Belg., Brussels **26** 1950 no. 13, 3 pp.

1441.—Janssens, E. Classification et zoogéographie (complément du Coleopterorum Catalogus pars 5, Paussidae). Bull. Inst. Sci. nat. Belg., Brussels **26** 1950 no. 51, 19 pp. 1 map.

1442.—Jansson, A. The gall-flies (Cynipidae) of Iceland. A revision. Ent. Medd., Copenhagen **25** 1950 pp. 425–428. [Hym.]

1443.—Jansson, A. Fjärde resan till Gotska Sandön I. Ent. Tidskr., Stockholm **71** 1950 pp. 199–220.

1444.—Jansson, A. *Anteon (Chelogynus) flaviscapus* nov. sp. (Hymen., Bethylidae). Ent. Tidskr., Stockholm **71** 1950 pp. 221–222, 1 fig.

1445.—Jansson, A. Studier över Thomsonska microhymenoptertyper. 1–2. [In Swedish with English summary.] Opusc. ent., Lund **15** 1950 pp. 121–125, 4 figs.

1446.—Jany, E. Der "Einbruch" von Erdhummeln (*Bombus terrestris* L.) in die Blüten der Feuerbohne (*Phaseolus multiflorus* Willd.). Z. angew. Ent., Berlin **32** 1950 pp. 172–183, 5 figs. [Hym.]

1447.—Jaques, H. E. A list of the leafcutting bees (family Megachilidae, Hymenoptera) known to occur in Iowa. Proc. Iowa Acad. Sci., Des Moines **55** 1948 pp. 389–390.

1448.—Jaques, H. E. A report on the Iowa species of Tachinidae (Diptera) in the Iowa insect survey collection. Proc. Iowa Acad. Sci., Des Moines **56** 1949 pp. 363–365.

Jaques, H. E. see Orman & Jaques; Schaffner & Jaques; Statler & Jaques.

1449.—Jarrige, J. Sur la position systématique des *Micropeplus* et description d'espèces nouvelles (Col. Staphylinidae). Bull. Soc. ent. France, Paris **55** 1950 pp. 26–30.

- 1450.**—Jarrige, J. Brachelytres nouveaux ou mal connus d'Indochine française (Col.). Bull. Soc. ent. France, Paris **55** 1950 pp. 132-135.
- 1451.**—Jarrige, J. Les *Phaeonomus* de France. Entomologiste, Paris **6** 1950 pp. 93-95. [Col.]
- 1452.**—Jarrige, J. Staphylinides halophiles observés à Banyuls-sur-Mer. Vie et Milieu, Paris **1** 1950 pp. 91-92. [Col.]
- 1453.**—Jarvis, C. M. Further additions to the Bedfordshire list of Coleoptera. Ent. mon. Mag., London **86** 1950 pp. 304-308.
- 1454.**—Jaschke, P. v. Bemerkungen zum Bau der alkokosternalen Cicindelinelytren. Zool. Anz., Leipzig **141** 1943 pp. 231-234, 1 fig. [Col.]
- 1455.**—Jeannel, R. Faune du Congo Belge et du Ruanda-Urundi. II.—Pselaphidae. Ann. Mus. Congo belge, Tervuren (Sér. 8°) Sci. zool. **2** 1949 275 [+2] pp. 121 figs. 1 map. [Col.]
- 1456.**—Jeannel, R. Coléoptères Pselaphides. Faune de France **53** 1950 iv+421 pp. 169 fgs. Paris, Lechevalier.
- 1457.**—Jeannel, R. Croisière du Bougainville aux îles australes françaises XIII. Hémiptères. Mém. Mus. Hist. nat., Paris (N.S.) **20** 1947 pp. 1-24, 70 fgs.
- 1458.**—Jeannel, R. Les Pséléaphides de l'Afrique Orientale (Coleoptera). Mém. Mus. Hist. nat., Paris (N.S.) **29** 1949 pp. 1-226, 103 fgs.
- 1459.**—Jeannel, R. Origine et évolution des insectes. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 80-86.
- 1460.**—Jeannel, R. Coléoptères cavernicoles de l'Anatolie recueillis par M. C. Kosswig. Publ. Mus. Hist. nat., Paris no. 8 1947 pp. 9-15, 1 fig. [Cf. Z.R. **84** 1947 no. 1386 p. 71.]
- 1461.**—Jeannel, R. Coléoptères cavernicoles nouveaux de France avec une étude sur la phylogénie des *Speonomus*. Publ. Mus. Hist. nat., Paris no. 8 1947 pp. 83-95, 7 fgs.
- 1462.**—Jeannel, R. Deux larves de *Speonomus* cavernicoles. Publ. Mus. Hist. nat., Paris no. 8 1947 pp. 97-99, 2 fgs. [Col.]
- 1463.**—Jeannel, R. Sur quelques *Geotrechus* et *Aphaenops* pyrénéens (Coleoptera Trechidae). Publ. Mus. Hist. nat., Paris no. 8 1947 pp. 101-120 ; no. 11 1948 pp. 7-16, 6 fgs.
- 1464.**—Jeannel, R. Un nouveau Bathysciite cavernicole des Picos de Europa (Col. Bathysciitae). Publ. Mus. Hist. nat., Paris no. 10 1948 pp. 73-74. [Col.]
- 1465.**—Jeannel, R. Nouveaux Bathysciites cavernicoles de l'Isère (Coleoptera Bathysciitae). Publ. Mus. Hist. nat., Paris no. 10 1948 pp. 75-78, 2 fgs.
- 1466.**—Jeannel, R. Un nouveau-type de Coléoptères cavernicoles de l'Afrique tropicale (Col. Colydiidae). Publ. Mus. Hist. nat., Paris no. 10 1948 pp. 79-82, 1 fig.
- 1467.**—Jeannel, R. Sur le genre *Leonhardella* Reitter et le peuplement souterrain des chaînes dinariques (Coleoptera Bathysciitae). Publ. Mus. Hist. nat., Paris no. 10 1948 pp. 89-100.
- 1468.**—Jeannel, R. Le sous-genre *Hydraphaenops* Jeannel, (Coleoptera Trechidae). Publ. Mus. Hist. nat., Paris no. 11 1948 pp. 17-27, 12 fgs.
- 1469.**—Jeannel, R. Influence des glaciers quaternaires sur la répartition des *Aphaenops* dans les Pyrénées occidentales. Publ. Mus. Hist. nat., Paris no. 11 1948 pp. 29-34, 1 map. [Col.]
- 1470.**—Jeannel, R. Sur quelques *Catops* du Japon. Rev. franç. Ent., Paris **17** 1950 pp. 31-33, 5 fgs. [Col.]
- 1471.**—Jeannel, R. Sur deux Ptérostichides cavernicoles de Majorque. Rev. franç. Ent., Paris **17** 1950 pp. 157-165, 4 fgs. [Col.]
- 1472.**—Jeannel, R. Un Elmide cavernicole du Congo belge (Coleoptera Dryopidae). Rev. franç. Ent., Paris **17** 1950 pp. 168-172, 7 fgs.
- 1473.**—Jeannel, R. Un *Plocamotrichus* de Madagascar (Coleoptera Trechidae). Rev. franç. Ent., Paris **17** 1950 pp. 172-175, 4 fgs.

1474.—Jeannel, R. Sur quelques Carabiques de la famille des Trichides recueillis par M. Hugh Scott dans le sud de l'Abyssinie. Rev. fran^c. Ent., Paris 17 1950 pp. 176–183, 13 figs. [Col.]

1475.—Jeannel, R. & Henrot, H. Les Coléoptères cavernicoles de la région des Appalaches. Publ. Mus. Hist. nat., Paris no. 12 1949 pp. 7–115, 99 figs.

Jeannenot, F. see Denis & Jeannenot.

1476.—Jedlička, A. Les nouveaux représentants du genre *Chlaenius* Bon. (Col. Carabidae). Acta Soc. ent. Čsl., Prague 47 1950 pp. 15–19.

1477.—Jenkins, D. W. & Hassett, C. C. Radioisotopes in entomology. Nucleonics, New York 6 1950 no. 3 pp. 5–14, 6 figs.

1478.—Jenkins, D. W. & Knight, K. L. Ecological survey of the mosquitoes of Great Whale River, Quebec (Diptera, Culicidae). Proc. ent. Soc. Washington 52 1950 pp. 209–223.

1479.—Jensen, D. D. Notes on the life history and ecology of blossom midge, *Contarinia lycopersici* Felt (Diptera: Cecidomyiidae). Proc. Hawaii. ent. Soc., Honolulu 14 (1949) 1950 pp. 91–100.

1480.—Jeuniaux, C. L'appareil de saut des taupins (Coléoptères Elatérides). Nat. belges, Brussels 31 1950 pp. 154–159, 2 figs.

1481.—Jírovec, C. Revision der in *Simulium*-Larven parasitierenden Mikrosporidien. Zool. Anz., Leipzig 142 1943 pp. 173–179, 1 fig. [Dipt.]

1482.—Johnson, C. G. The comparison of suction trap, sticky trap and tow-net for the quantitative sampling of small airborne insects. Ann. appl. Biol., London 37 1950 pp. 268–285, 8 figs.

1483.—Johnson, L. R. & Carrick, R. The bionomics and postembryonic development of *Gastroidea polygoni* L. (Coleoptera, Chrysomelidae). Proc. Leeds phil. lit. Soc. Sci. Sect. 5 1950 pp. 279–294, 5 figs.

1484.—Johnson, P. T. & Thurman, E. B. The occurrence of *Aedes (Ochlerotatus) pullatus* (Coquillett) in California (Diptera: Culicidae). Pan-Pacif. Ent., San Francisco 26 1950 pp. 107–110, 1 fig.

Johnson, P. T. see Thurman & Johnson.

1485.—Johnston, E. C. Lepidoptera of the Pribilof Islands, Alaska. Lep. News, New Haven 4 1950 pp. 27–30.

1486.—Jolivet, P. *Bechyneia spinosa* nov. gen., nov. sp. (Col. Chrysomelidae). Bull. Ann. Soc. ent. Belg., Brussels 86 1950 pp. 36–39, 5 figs.

1487.—Jolivet, P. Les parasites, prédateurs et phorétiques des Chrysomeloidea (Coleoptera) de la faune franco-belge. Bull. Inst. Sci. nat. Belg., Brussels 26 1950 no. 34, 39 pp.

1488.—Jolivet, P. *Elytrosphaera melas* n. sp. Bull. Inst. Sci. nat. Belg., Brussels 26 1950 no. 43, 4 pp., 3 figs. [Col.]

1489.—Jolivet, P. Contribution à l'étude des *Microtheca* Stål (Coleoptera Chrysomelidae). Bull. Inst. Sci. nat. Belg., Brussels 26 1950 no. 48, 27 pp., 11 figs.

1490.—Jolivet, P. Rectifications de nomenclature chez les Chrysomeloidea (1^{re} note). Bull. Inst. Sci. nat. Belg., Brussels 26 1950 no. 56, 4 pp. 3 figs. [Col.]

1491.—Jolivet, P. Une nouvelle espèce de *Timarcha* (Col. Chrysomelidae) des Pyrénées Orientales. Vie et Milieu, Paris 1 1950 pp. 235–239, 5 figs.

1492.—Jolivet, P. & Théodoridès, J. Les helminthes parasites de Coléoptères Chrysomélidés. Ann. Paras. hum. comp., Paris 25 1950 pp. 340–349, 1 fig.

1493.—Jolivet, P. & Théodoridès, J. Découverte d'une nouvelle espèce de *Timarcha* (Col. Chrysomelidae) sur la plage de Banyuls-s/Mer (Pyrénées-Orientales). Bull. Soc. ent. France, Paris 55 1950 pp. 119–120.

1494.—Joly, D. Fonctionnement ovarien des carabes. C.R. Soc. Biol., Paris 144 1950 pp. 1217–1220, 5 figs. [Col.]

- 1495.**—Joly, P. Le système endocrin rétrocérébral chez les Acridiens migrateurs. Ann. Sci. nat., Paris (11) **11** 1949 pp. 255–262, 11 figs. [Orth.]
- 1496.**—Jones, A. M. The setting up of the microscope and notes on mounting fairy flies. J. Quekett micr. Cl., London (4) **3** 1950 pp. 144–149.
- 1497.**—Jones, J. C. The normal hemocyte picture of the yellow meal-worm, *Tenebrio molitor* Linnaeus. Iowa St. Coll. J. Sci., Ames **24** 1950 pp. 355–361, 1 fig. [Col.]
- 1498.**—Jones, J. R. E. A further ecological study of the River Rheidal: the food of the common insects of the main-stream. J. Anim. Ecol., London **19** 1950 pp. 159–174, 2 figs.
- 1499.**—Jordan, H. E. K. On characteristics common to all known species of Suctoria and some trends of evolution in this order of insects. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 87–95, 25 figs. [Siphonapt.]
- 1500.**—Jordan, K. Notes on a collection of fleas from Peru. Bull. World Hlth Org., Geneva **2** 1950 pp. 597–609, 5 figs. [Siphonapt.]
- 1501.**—Jordan, K. Anthribidae (Coleoptera Rhynchophora). Explor. Parc nat. Albert, Miss. de Witte (1933–1935), Brussels 1950 fasc. 70 pp. 17–20.
- 1502.**—Jordan, K. Contribution à l'étude de l'Air. Siphonaptères. Mém. Inst. franç. Afr. noire, Paris no. 10 1950 pp. 282–283.
- 1503.**—Jordan, K. H. C. Die Heteropterofauna der Oberlausitz und Ostsachsens. Isis Budissina, Bautzen **14** (1936–1940) 1940 pp. 96–156. [Hem.]
- 1504.**—Jordan, K. H. C. Neue und seltene Funde von Heteropteren in der Oberlausitz seit 1940. Mitt. naturw. Ges. "Isis" Bautzen Heft 28 (1940–1941) 1941 pp. 9–10. [Hem.]
- 1505.**—Jöst, H. *Pristophora florella* Mann in der Pfalz (Lep., Pyralidae) (Neu für Deutschland). Z. Lepid., Krefeld **1** 1950 pp. 45–48, 1 pl. 1 fig.
- 1506.**—Judd, W. W. Emergence of the lacewing *Chrysopa harrisii* Fitch (Neuroptera) and three Hymenopterous parasites from the cocoon. Ann. ent. Soc. Amer., Columbus **42** (1949) 1950 pp. 461–464, 2 figs.
- 1507.**—Judd, W. W. Aggregations of the snow-flea, *Achorutes socialis* Uzel (Collembola), recurring over three years. Canad. Ent., Guelph **82** 1950 pp. 84–85.
- 1508.**—Judd, W. W. *Acentropus niveus* (Oliv.) (Lepidoptera: Pyralidae) on the north shore of Lake Erie with a consideration of its distribution in North America. Canad. Ent., Guelph **82** 1950 pp. 250–252, 2 maps.
- 1509.**—Judd, W. W. Further records of the occurrence of the European praying mantis (*Mantis religiosa* L.) in southern Ontario (Orthoptera). Ent. News, Lancaster, Pa. **61** 1950 pp. 205–207.
- 1510.**—Judd, W. W. An assemblage of monarch butterflies (*Danaus plexippus* L.) on the north shore of Lake Erie. J. New York ent. Soc. **58** 1950 pp. 169–171. [Lep.]
- 1511.**—Julliard, C. Nid de l'*Odynerus scoticus* Curtis (Hym. Vespidae). Mitt. schweiz. ent. Ges., Berne **23** 1950 pp. 369–376, 4 figs.
- 1512.**—Jung, R. C. An annotated list of the Lepidoptera of the New Orleans area. Proc. Louisiana Acad. Sci., Baton Rouge **13** 1950 pp. 42–48.
- Kadowaki, S. see Tokunaga & Kadowaki.
- 1513.**—Kaiser, E. W. *Sialis nigripes* Ed. Pict., ny for Danmark, og udbredelsen af *S. lutaria* L. og *S. fuliginosa* Pict. i Danmark. Flora og Fauna, Copenhagen **56** 1950 pp. 17–36, 3 figs. 3 maps. [Megalopt.]
- 1514.**—Kaisila, J. Ueber die vermuteten Bastarde zwischen *Colias hecla sulitelma* Aur. und *C. nastes werdandi* Zett. (Lep., Pieridae). Ann. ent. fenn., Helsinki **16** 1950 pp. 112–121, 2 figs.
- 1515.**—Kalik, V. Neue Dermestiden aus der paläarktischen Fauna (3. Beitrag). Folia ent. hung., Budapest (N.S.) **3** 1950 pp. 61–66, 3 figs. [Col.]

1516.—**Kalima**, B. F. Development and viability of *Drosophila melanogaster* on a medium containing DDT. *Science, Lancaster, Pa.* **111** 1950 pp. 39–40. [Dipt.]

1517.—**Kalis**, J. P. A. On two Pieridae from Indonesia. *Idea, Bogor (Buitenzorg)* **8** 1950 pp. 45–46. [Lep.]

1518.—**Kalshoven**, L. G. E. De plagen van de cultuurgewassen in Indonesie. Deel I. 's-Gravenhage, W. Van Hoeve 1950 512 pp. 297 figs. (Lijst van afkortingen bij de literatuuropgaven [7 pp.])

1519.—**Kalshoven**, L. G. E. Insects on Canna. Observations in a town garden. *Idea, Bogor (Buitenzorg)* **8** 1950 pp. 17–19.

1520.—**Kanda**, S. Some scale-insects from Shansi, North China. [In Japanese with an English description.] *Mushi, Fukuoka* **21** 1950 pp. 33–37, 1 pl. [Hem.]

1521.—**Kano**, R. Notes on the flies of medical importance in Japan (part I.) Flies of Hokkaido. *J. exp. Med., Tokyo* **20** 1950 pp. 823–831, 27 figs. [Dipt.]

Kano, R. *see* Sasa, Kano & Takahashi.

1522.—**Kapur**, A. P. The biology and external morphology of the larvae of Epilachninae (Coleoptera, Coccinellidae). *Bull. ent. Res., London* **41** 1950 pp. 161–208, 1 pl. 22 figs.

1523.—**Kapur**, A. P. Contribution à l'étude de l'Aïr. Coléoptères Coccinellidae. *Mém. Inst. franç. Afr. noire, Paris no. 10* 1950 p. 183.

1524.—**Kapur**, A. P. A new species of *Stethorus* Weise from India (Coleoptera: Coccinellidae). *Proc. R. ent. Soc. London (B)* **19** 1950 pp. 148–149, 1 fig.

1525.—**Kapur**, A. P. The identity of some Crambinae associated with sugar-cane in India and of certain species related to them (Lepidoptera: Pyralidae). *Trans. R. ent. Soc. London* **101** 1950 pp. 389–434, 10 pls.

1526.—**Karabag**, T. Five new species of *Poecilimon* Fischer (Orthoptera: Tettigoniidae) from Turkey.

Proc. R. ent. Soc. London (B) **19** 1950 pp. 150–155, 33 figs.

1527.—**Karabag**, T. On some new Decticinae (Orthoptera: Tettigoniidae) from Turkey. *Proc. R. ent. Soc. London (B)* **19** 1950 pp. 157–161, 17 figs.

1528.—**Karam Singh**. On the anatomy of the fourth instar larva (prepupal phase) of the Jamun Whitefly *Dialeurodes eugeniae* (Maskell) (Homoptera, Aleurodidae). *Indian J. Ent., New Delhi* **11** (1949) 1950 pp. 25–46, 34 figs.

1529.—**Karandikar**, K. R. & **Munshi**, D. M. Life-history and bionomics of the cat flea, *Ctenocephalides felis* Bouché. *J. Bombay nat. Hist. Soc.* **49** 1950 pp. 169–177, 6 figs. [Siphonapt.]

Karlson, P. *see* Buterandt, Karlson & Harnes.

1530.—**Karpiak**, S. E. On the phosphorus compounds in the eggs of *Celerio euphorbiae* L. (Lepid.). [In Polish with English summary.] *Polsk. Pismo ent., Wrocław* **19** (1949) 1950 pp. 277–284.

Karpiak, S. *see* Heller, Karpiak & Zubikowa.

1531.—**Kartman**, L. On the host-parasite relation. *J. econ. Ent., Menasha* **43** 1950 pp. 385–386.

1532.—**Kaszab**, Z. Die indischen Arten der Gattung *Pachypterus*. *Folia ent. hung., Budapest* **6** 1941 pp. 16–20. [Col.]

1533.—**Kaszab**, Z. Ueber die Gattungen *Tearchus* Kr. und *Tonkinius* Fairm. (Col., Tenebr.). *Folia ent. hung., Budapest* **8** 1943 pp. 71–74.

1534.—**Katō**, M. The general consideration on the diurnal activity of the strawberry weevil, *Anthomus bisignifer* Schencking, with special reference to the body temperature of the weevil and the environmental temperature factors. *Sci. Rep. Tōhoku Univ., Sendai* (4) *Biol.* **15** 1940 pp. 179–189, 2 figs.

1535.—**Katō**, M. Feeding activity of a grasshopper, *Prunna* sp., widely distributed at Mts. Hakkōda. *Sci. Rep. Tōhoku Univ. (4) Biol.* **15** 1940 pp. 191–201, 8 figs. [Orth.]

1536.—**Katô, M.** Ecological notes on the activities of some insects coming to the flowers of "yatô" *Fatsia japonica*, with special reference to the ecological importance of the solar radiant energy. *Sci. Rep. Tôhoku Univ.* (4) **Biol.** *17* 1943 pp. 255–262, 6 figs.

1537.—**Katô, M.** The diurnal activity of a Dermestid beetle, *Attagenus japonicus*. *Sci. Rep. Tôhoku Univ.*, Sendai (4) **Biol.** *18* 1949 pp. 195–204, 3 figs. [Col.]

1538.—**Kato, S.** A preliminary report on a survey of agricultural insect pests in Chahar, Suiyuan and Northern Shansi. *Peking nat. Hist. Bull.* *18* 1949 pp. 11–36.

1539.—**Kaudewitz, H.** Die Honigbiene als Objekt der Abstammungslehre. *Mikrokosmos*, Stuttgart **40** 1950 pp. 71–72, 3 figs. [Hym.]

1540.—**Kauffmann, G.** *Spialia servitorius parataras* n. forma (Lep. Hesperiidae). *Ent. NachrBl. öst. schweiz. Ent.*, Vienna **2** 1950 pp. 90–93, 2 figs.

1541.—**Kauffmann, G.** Ulteriori osservazioni biotopiche e genitoanatomiche su *Pyrgus alveus* Hübner, 1803 nella zona del tre laghi prealpini (Lario, Ceresio, Verbano) (Lep. Hesperiidae). *Mem. Soc. ent. ital.*, Genova **29** 1950 pp. 117–124, 4 figs.

1542.—**Kauffmann, G.** Remarques concernant deux aberrations de *Pyrgus carlineae* Rbr. (Lep. Hesperiidae). *Mitt. schweiz. ent. Ges.*, Berne **23** 1950 pp. 67–69, 2 figs.

1543.—**Kaufmann, B. P. & Wilson, K.** Modification of the frequency of chromosomal rearrangements induced by x-rays in *Drosophila*. IV. Post-treatment with near infrared radiation. *Genetics*, Menasha **34** 1949 pp. 425–436. [Dipt.]

1544.—**Kaussari, M.** Les Coccidae du saule en Iran. *Ent. Phytopath. appl.*, Teheran no. 11 1950 pp. 1–5, 7 figs. [Hem.]

1545.—**Kautz, H.** Die gelben Formen von *Pieris napi* L. *Z. wien. ent. Ges.*, Vienna **35** 1950 pp. 42–50. [Lep.]

1546.—**Keilbach, R.** Die Käsefliege *Piophila casei* L. als Schädling an gesalzenen Häuten. *Z. hyg. Zool.*, Berlin **38** 1950 pp. 353–357, 8 figs. [Dipt.]

1547.—**Keiser, F.** Phänologische Beobachtungen an alpinen Dipteren. *Proc. 8th Congr. Ent.* Stockholm 1948, 1950 pp. 418–422, 4 figs.

Keleïnikova, S. I. see Smirnov & Keleïnikova.

1548.—**Keller, H.** Die Kultur der intrazellulären Symbionten von *Periplaneta orientalis*. *Z. Naturf.*, Tübingen **5b** 1950 pp. 269–273. [Orth.]

1549.—**Kennedy, C. H.** The relation of American dragonfly-eating birds to their prey. *Ecol. Monogr.*, Durham, N.C. **20** 1950 pp. 103–142. [Odon.]

1550.—**Kennedy, J. S.** Host-finding and host-alternation in Aphides. *Proc. 8th int. Congr. Ent.* Stockholm 1948, 1950 pp. 423–426. [Hem.]

1551.—**Kennedy, J. S. & Booth, C. O.** Methods for mass rearing and investigating the host relations of *Aphis fabae* Scop. *Ann. appl. Biol.*, London **37** 1950 pp. 451–470, 7 figs. [Hem.]

1552.—**Kern, F.** Untersuchungen an *Amphimallus solstitialis* L. mit Versuchen zur bakteriologischen Bekämpfung von Engerlingen. *Thesis*, Eidg. tech. Hochsch. Zürich 1950 75 [+ 1] pp. 37 figs. [Col.]

1553.—**Kern, F.** Untersuchungen über den Fettstoffwechsel bei der Larve des *Curculio caryae* (Horn) (Coleopt. Curculionid.). *Mitt. schweiz. ent. Ges.*, Berne **23** 1950 pp. 129–134, 3 figs.

1554.—**Kerr, W. E.** Evolution of the mechanism of caste determination in the genus *Melipona*. *Evolution*, Lancaster, Pa. **4** 1950 pp. 7–13. [Hym.]

1555.—**Kerr, W. E.** Genetic determination of castes in the genus *Melipona*. *Genetics*, Menasha **35** 1950 pp. 143–152. [Hym.]

1556.—Kerr, W. E. & Krause, W. Contribuição para o conhecimento da bionomia dos Meliponini. Fecundação da rainha em *Melipona quadrifasciata* Lep. (Hymenop. Apoidea). Dusenia, Curitiba **1** 1950 pp. 275–282, 3 figs.

Kerr, W. E. see Brieger & Kerr; Mouré & Kerr.

1557.—Kerrick, G. J. The Gravenhorst Ichneumonidae (Hym.) of 1820. Ent. mon. Mag., London **86** 1950 pp. 323–324.

1558.—Kessel, E. L. *Protoclythia*, a new genus of flat-footed flies, and the description of two new species (Diptera: Clythiidae). Wasmann Collector, San Francisco **7** (1949) 1950 pp. 257–275.

1559.—Kessel, E. L. A new species of *Clythia* from California (Diptera: Clythiidae). Wasmann J. Biol., San Francisco **8** 1950 pp. 77–80.

1560.—Kessler, P. *Parasemia plantaginis* L. Ent. NachrBl. öst. schweiz. Ent., Vienna **2** 1950 pp. 51–52. [Lep.]

1561.—Kettle, D. S. The seasonal distribution of *Culicoides impunctatus* Goetghebuer (Diptera: Heleidae (Ceratopogonidae)) with a discussion on the possibility that it may be composed of two or more biological races. Trans. R. ent. Soc. London **101** 1950 pp. 125–145, 7 figs.

1562.—Kevan, D. K. McE. The grasshopper fauna of a small East African swamp. Ent. mon. Mag., London **86** 1950 pp. 316–319, 1 map. [Orth.]

1563.—Key, K. H. L. A critique on the phase theory of locusts. Quart. Rev. Biol., Baltimore **25** 1950 pp. 363–407. [Orth.]

1564.—Khalifa, A. Sexual behaviour in *Gryllus domesticus* L. Behaviour, Leiden **2** 1950 pp. 264–274, 2 figs. [Orth.]

1565.—Khalifa, A. Spermatophore production and egg-laying behaviour in *Rhodnius prolixus* Stål (Hemiptera: Reduviidae). Parasitology, London **40** 1950 pp. 283–289, 3 figs.

1566.—Khalifa, A. Spermatophore production in *Galleria mellonella* L. (Lepidoptera). Proc. R. ent. Soc. London (A) **25** 1950 pp. 33–42, 7 figs.

1567.—Khalifa, A. Spermatophore production in *Blattella germanica* L. (Orthoptera: Blattidae). Proc. R. ent. Soc. London (A) **25** 1950 pp. 53–61, 6 figs.

1568.—Khanna, K. L., Nigam, L. N., Sehgal, B. R. & Bandyspadhyay, K. S. Studies on sampling technique. I. Estimation of whitefly (*Aleurolobus barodensis*) incidence in sugar-cane. Proc. Indian Acad. Sci., Bangalore **28B** 1948 pp. 107–130. [Hem.]

1569.—Kikkawa, H. Tryptophane synthesis in insects. Science, Lancaster, Pa. **111** 1950 pp. 495–496.

Kikkawa, H. see Hirata, Nakanishi & Kikkawa.

1570.—Kimmings, D. E. Handbooks for the identification of British insects. Plecoptera. Pt. 6 (18 pp. 49 figs.). Ephemeroptera. Pt. 9 (18 pp. 55 figs.). London, R. ent. Soc. **1** 1950.

1571.—Kimmings, D. E. Results of the Armstrong College Expedition to Siwa Oasis (Libyan Desert), 1935, under the leadership of Prof. J. Omer-Cooper. Odonata and Neuroptera. Bull. Soc. Fouad Ier Ent., Cairo **34** 1950 pp. 151–157, 4 figs.

1572.—Kimmings, D. E. A Brachypterous Coniopterygid (Order Neuroptera) from Mt. Ruwenzori, Uganda. Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 166–171, 3 figs.

1573.—Kimmings, D. E. *Umma mesostigma* (Selys) and *U. saphirina* Forst. (Odonata, Agriliidae). Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 171–176, 5 figs.

1574.—Kimmings, D. E. Some new species of Asiatic Plecoptera. Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 178–192, 26 figs.

1575.—Kimmings, D. E. Some Assamese Plecoptera, with descriptions of new species of Nemouridae. Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 194–209, 17 figs.

1576.—Kimmings, D. E. Some new African Ascalaphidae (Neuroptera). Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 242–252, 9 figs.

- 1577.—**Kimmins**, D. E. Indian Caddis flies (Trichoptera). I—III. Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 590–603, 7 figs., pp. 696–705, 4 figs., 905–934, 71 figs.
- 1578.—**Kimmins**, D. E. The type-species of certain genera in the Trichoptera. Entomologist, London **83** 1950 pp. 58–60.
- 1579.—**King**, R. L. Neo-Y chromosome in *Hypochlora alba* and *Mermiria intertexta* (Orthoptera: Acrididae). J. Morph., Philadelphia **87** 1950 pp. 227–237, 1 pl.
- 1580.—**King**, R. L. A tropical ant temporarily established in Iowa. Proc. Iowa Acad. Sci., Des Moines **55** 1948 p. 395. [Hym.]
- 1581.—**King**, R. L. Mixed colonies in ants. Proc. Iowa Acad. Sci., Des Moines **56** 1949 pp. 367–370. [Hym.]
- King**, R. L. see Sallee & King.
- 1582.—**Kinnmark**, F. Om *Onthophagus taurus* Schreber. Ent. Tidskr., Stockholm **71** 1950 pp. 1–8, 3 figs. [Col.]
- 1583.—**Kinoshita**, S., **Hama**, T. & **Fukaya**, M. The effect of population ratio between *Trichogramma japonicum* Ashmead and *Ephestia cautella* Walker upon the phases of parasitism. [In Japanese with English summary.] J. nat. agric. Exp. Sta. Nishigahara, Tokyo **4** 1950 pp. 55–76, 19 graphs. [Hym., Lep.]
- 1584.—**Kiriakoff**, S. G. Recherches sur les organes tympaniques des Lépidoptères en rapport avec la classification. IV. Notodontidae. Biol. Jaarb., Antwerp **17** 1950 pp. 66–111, 12 figs.
- 1585.—**Kiriakoff**, S. G. Recherches sur les organes tympaniques des Lépidoptères en rapport avec la classification. III. Diptidae. Bull. Ann. Soc. ent. Belg., Brussels **86** 1950 pp. 67–86, 2 pls. 1 fig.
- 1586.—**Kiriakoff**, S.-G. Sur la classification et la phylogénie de la super-famille Notodontoidea (F. d'Almeida) Kiriakoff (Lépidoptères). Bull. Ann. Soc. ent. Belg., Brussels **86** 1950 pp. 236–255.
- [**Kirichenko**, A. N.] see Pavlovskii & Vinogradov,
- 1587.—**Kirk**, R. & **Lewis**, D. J. Three new sandflies (*Phlebotomus*) from East Africa. Proc. R. ent. Soc. London (B) **19** 1950 pp. 11–13, 2 figs. [Dipt.]
- 1588.—**Kitzmiller**, J. B. The time interval between determination and differentiation of wings, ocelli, and wing muscles in the Aphid *Macrosiphum sanborni* (Gillette). Amer. Nat., Lancaster, Pa. **84** 1950 pp. 23–50, 3 figs. [Hem.]
- 1589.—**Kitzmiller**, J. B. Fertility in species crosses in mosquitoes. Ent. News, Lancaster, Pa. **61** 1950 pp. 130–131. [Dipt.]
- 1590.—**Klapperich**, J. Eine neue Art der Cupesidae (Coleoptera) aus Asien. Bonn. zool. Beitr. **1** 1950 pp. 83–85, 3 figs., 1 map.
- 1591.—**Clatt**, B. 30 Jahre Inzucht beim Schwammspinner. Zool. Anz., Leipzig **144** 1944 pp. 169–184, 1 fig. [Lep.]
- 1592.—**Kleine**, R. Klapperichs China-Ausbeute II. Teil (Lycidae und Brentidae). Ent. Bl., Krefeld **45–46** (1949–1950) 1950 pp. 21–25, 1 fig. [Col.]
- 1593.—**Klimesch**, J. Ueber einige Nahrungsrasen von *Nepticula*-Arten (Lep., Nepticulidae). Ent. NachrBl. öst. schweiz. Ent., Vienna **2** 1950 pp. 49–51, 72–74, 89–90, 31 figs.
- 1594.—**Klimesch**, J. Ueber einige Nahrungsrasen von *Nepticula*-Arten (Lep., Nepticulidae). Wien. ent. Rdsch., Vienna **2** 1950 pp. 25–28.
- 1595.—**Kloft**, W. Oekologische Untersuchungen zur Verbreitung der Mermithiden bei Ameisen. Zool. Jb., Jena (Syst.) **78** 1950 pp. 526–530. [Hym.]
- Klostermeyer**, E. C. see Severin & Klostermeyer.
- 1596.—**Knight**, K. L. & **Mattingly**, P. F. The *Orthopodomyia* Anopheles subgroup of mosquitoes (Diptera, Culicidae). Proc. ent. Soc. Washington **52** 1950 pp. 1–20, 1 pl.
- Knight**, K. L. see Jenkins & Knight.
- 1597.—**Knowlton**, G. F. Ladybird beetle feeding notes. Ent. News, Lancaster, Pa. **60** (1949) 1950 pp. 234–236. [Col.]

- 1598.**—**Knowlton**, G. F. Insects of Utah. Some Western Tabanidae. Utah agric. Exp. Sta., Logan Mimeogr. Ser. 353 (Tech.) 1949 6 pp. [Dipt.]
- 1599.**—**Knowlton**, G. F. & **Fronk**, L. E. Some locality records of Utah Heleidae. J. Kansas ent. Soc., Manhattan 23 1950 pp. 113–114. [Dipt.]
- 1600.**—**Knowlton**, G. F. & **Hall**, L. L. A new grass Aphid from Utah. Ent. News, Lancaster, Pa. 61 1950 pp. 41–42. [Hem.]
- 1601.**—**Knowlton**, G. F. & **Wood**, S. L. An annotated list of Utah Cerambycidae. Bull. Brooklyn ent. Soc. 45 1950 pp. 10–13. [Col.]
- Knowlton**, G. F., see Bohart, Knowlton & Bailey; McComb & Knowlton; Wray, Knowlton & Ma.
- 1602.**—**Knull**, J. N. New Coleoptera with notes. II (Buprestidae and Cerambycidae). Ent. News, Lancaster, Pa. 61 1950 pp. 89–92.
- 1603.**—**Kobayashi**, T. Ecological notes on *Haltica cyanea* Weber (Coleoptera: Chrysomelidae). [In Japanese with English summary.] Trans. Shikoku ent. Soc. 1 1950 pp. 45–48, 5 figs.
- 1604.**—**Koch**, A. Der Kornkäfer, ein Getreideschädling mit Bakteriensymbiose. Mikrokosmos, Stuttgart 40 1950 pp. 9–13, 8 figs. [Col.]
- 1605.**—**Koch**, A. Fünfzig Jahre Erforschung der Insekten-symbiosen. Naturwissenschaften, Berlin 37 1950 pp. 313–317.
- 1606.**—**Koch**, C. Contribution to the knowledge of the Epitragini-genus *Himatismus* (the Tenebrionidae of Southern Africa. II). Ann. Mus. Congo belge, Tervuren (Sér. 8°) Sci. zool. 3 1950 44 pp. 12 pls. 2 figs. [Col.]
- 1607.**—**Koch**, C. The Tenebrionidae of southern Africa. I. First account of the Tenebrionidae collected on the University of California-Transvaal Museum Expedition, 1948. Ann. Transv. Mus., Pretoria 21 1950 pp. 273–367, 19 pls. [Col.]
- 1608.**—**Koch**, C. Die Tenebrioniden des südlichen Afrikas, IV,— Ueber vier neue afrikanische *Himatismus*-Arten. Ent. Arb., München 1 1950 pp. 186–197, 1 pl. [Col.]
- 1609.**—**Koch**, C. Proposed change of African generic names in the family Tenebrionidae (Col.). Entomologist, London 83 1950 pp. 66–68.
- 1610.**—**Koch**, M. Lichtfang mit der Höhensonnen III. Z. wien. ent. Ges., Vienna 35 1950 pp. 117–123. [Lep.]
- 1611.**—**Koegel**, A. Nutztierparasitologie für Tierärzte, Landwirte und Nutztierhalter. Band 1. Protozoologie und Entomologie unter Mitarbeit von Hermann Bollow. Stuttgart, Ferdinand Enke 1950 vii + 339 pp. 130 figs.
- Koesoemawinangoen**, R. Waktoedi see Stoker & Koesoemawinangoen.
- Kohler**, C. E. see Fox & Kohler.
- 1612.**—**Komai**, T. Semi-allelic genes. Amer. Nat., Lancaster, Pa. 84 1950 pp. 381–392. [Dipt.]
- 1613.**—**Komai**, T., **Chino**, M. & **Hosino**, Y. Contributions to the evolutionary genetics of the lady-beetle, *Harmonia*. I. Geographic and temporal variations in the relative frequencies of the elytral pattern types and in the frequency of elytral ridge. Genetics, Menasha 35 1950 pp. 589–601, 1 fig. [Col.]
- 1614.**—**Komárek**, J. The vertical geographical migration of some phytophagous insects (*Ips typographus* L., *Lymantria monacha* L., *Lecanium coryli* L., *Semasia diniana* Gn. etc.). [In Czech with English summary.] Acta Soc. ent. Čsl., Prague 47 1950 pp. 110–119.
- 1615.**—**Komárek**, O. La contribution à la connaissance de la faune lépidoptérologique de la Bohême du Nord-Est, avec les diagnoses de deux formes nouvelles. [In Czech with Latin summary.] Acta Soc. ent. Čsl., Prague 47 1950 pp. 41–45, 1 fig.
- 1616.**—**Komárek**, O. Contribution aux connaissances écologiques de *Limenitis populi* L. (Lep. Nymph.). In Czech with French summary.] Acta Soc. ent. Čsl., Prague 47 1950 pp. 168–177.

Komp, W. H. W. see Rozeboom & Komp.

1617.—Kontkanen, P. A peculiar deformity of the external genitalia observed in some Euscelid leaf-hoppers. Ann. ent. fenn., Helsinki **16** 1950 pp. 91–92, 4 figs. [Hem.]

1618.—Kontkanen, P. Notes on the parasites of leafhoppers in North Karelia. Ann. ent. fenn., Helsinki **16** 1950 pp. 101–109. [Hem., Col., Dipt.]

1619.—Kontkanen, P. Sur les diverses méthodes de groupement des récoltes dans la biocénétique animale. Vie et Milieu, Paris **1** 1950 pp. 121–130, 1 fig.

1620.—Kontuniemi, T. Gedanken zu gegenseitigen Tauschverbindungen der Museen. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 145–146.

1621.—Kooistra, G. Contribution to the knowledge of the action of acetylcholine in the intestine of *Periplaneta americana* L. Physiol. comp. oecol., The Hague **2** 1950 pp. 75–80, 1 pl. 1 fig. [Orth.]

1622.—Koopman, K. F. Natural selection for reproductive isolation between *Drosophila pseudoobscura* and *D. persimilis*. Evolution, Lancaster, Pa. **4** 1950 pp. 135–148, 3 figs. [Dipt.]

1623.—Korbel, L. Contribution à la connaissance du genre *Philonthus* subgen. *Gabrius* (Coleoptera) des régions d'inondation du Danube près de Šamorín. [In Czech with French summary.] Prírod. Sbornik, Bratislava **4** 1949 pp. 159–161.

Korda, F. H. see Richards & Korda.

1624.—Korell, A. Neubeschreibung einer Form von *Carabus auronitens* Fabr. (Col. Carabidae). Mitt. münchen. ent. Ges., Munich **40** 1950 pp. 304–305, 1 fig.

Korell, A. see Poschinger & Korell.

1625.—Kormilev, N. A. La subfamilia Oxycareninae Stål en la Argentina, con la descripción de una especie nueva (Hemiptera, Lygaeidae). An. Soc. cient. argent., Buenos Aires **149** 1950 pp. 22–32, 7 figs.

1626.—Kormilev, N. A. Dos especies nuevas del género *Adoxoplatus* Breddin (1903) de Bolivia (Hemiptera, Pentatomidae). Notas Mus. La Plata **14** (Zool.) 1949 pp. 313–324 1 pl. 3 figs.

1627.—Kormilev, N. A. Notes on Neotropical Pentatomidae, with description of one new genus and two new species (Hemiptera). Rev. brasili. Biol., Rio de Janeiro **10** 1950 pp. 339–346, 5 figs.

1628.—Kormilev, N. A. Notes on neotropical Phymatidae. Diagnosis of new species (Hemiptera). Rev. Ent., Rio de Janeiro **21** 1950 pp. 581–591.

1629.—[Kosmachevskii, A. S.] The effect of temperature and humidity on the rapidity of the development of click-beetles. [In Russian.] C.R. Acad. Sci. URSS, Moscow (N.S.) **73** 1950 pp. 1101–1103. [Col.]

1630.—Kosswig, C. Structure et formation des chromosomes géants chez la larve de *Chironomus*. C.R. 13e Congr. int. Zool. Paris 1948, 1949 p. 178. [Dipt.]

Kostić, D. see Simić, Gvozdenović & Kostić.

1631.—Kostić, L. Prinos poznavanja biocenoza potoka Lipovačke Gradne i Gračanskog. [In Serbian.] [Contributions to the knowledge of the biocenosis of the stream of Lipovačke Gradne and Gračanskog.] Glasnik hrv. pridodosl. Dr., Zagreb (2B) **1** 1947 pp. 125–144.

1632.—Kovács, L. *Chloridea maritima* Grasl. und *dipsacea* L. in Ungarn. Folia ent. hung., Budapest (N.S.) **3** 1950 pp. 66–70. [Lep.]

[Kozhanchikov, I.V.] see Pavlovskii & Vinogradov.

1633.—Kraczkiewicz, Z. Recherches cytologiques sur les chromosomes de *Lasioptera rubi* Heeg. (Cecidomyiidae). Zool. Polon., Wrocław **5** 1950 pp. 73–117, 1 pl. 12 figs. [Dipt.]

1634.—Kramer, K. U. Een verwaarloosde Nederlandse *Myrmica* vorm? Ent. Ber., Amsterdam **13** 1950 pp. 97–98. [Hym.]

1635.—Kramer, K. U. & Heerdt, P. F. van. Remarques écologiques sur quelques Formicides des Hautes Fagnes. Bull. Inst. Sci. nat. Belg., Brussels **26** 1950 no. 58, 10 pp. [Hym.]

1636.—Kramer, S. The morphology and phylogeny of Auchenorrhynchos Homoptera (Insecta). Illinois biol. Monogr., Urbana **20** 1950 vii & 78 pp. 16 pls. 6 charts.

1637.—Kramer, S. & Wigglesworth, V. B. The outer layers of the cuticle in the cockroach *Periplaneta americana* and the function of the oenocytes. Quart. J. micr. Sci., London **91** 1950 pp. 63–72, 1 pl. 4 figs. [Orth.]

Krause, W. see Kerr & Krause.

1638.—Krijgsman, B. J., Dresden, D. & Berger, N. E. The action of rotenone and tetraethyl pyrophosphate on the isolated heart of the cockroach. Bull. ent. Res., London **41** 1950 pp. 141–151, 5 figs. [Orth.]

1639.—Krishnamurti, B. Aphidiidae of Mysore—III. Indian J. Ent., New Delhi **10** (1948) 1950 pp. 51–53. [Hem.]

1640.—Krivshenko, J. D. The structure of the heterochromatic part of the Y-chromosome in *Drosophila buscki*. Proc. nat. Acad. Sci. U.S.A., Washington **36** 1950 pp. 703–707, 1 fig. [Dipt.]

Krog, H. see Thomsen & Krog.

1641.—Krombein, K. V. Synonymical notes on North American Sphecoid wasps : III (Hymenoptera). Bull. Brooklyn ent. Soc., Lancaster, Pa. **45** 1950 pp. 35–40.

1642.—Krombein, K. V. Taxonomic notes on the wasps of the subgenus *Pseneo* Malloch (Hymenoptera, Sphecidae). Proc. ent. Soc. Washington **52** 1950 pp. 277–287.

1643.—Krombein, K. V. The Aculeate Hymenoptera of Micronesia. II. Colletidae, Halictidae, Megachilidae, and Apidae. Proc. Hawaii. ent. Soc., Honolulu **14** (1949) 1950 pp. 101–142, 41 figs.

1644.—Krombein, K. V. & Willink, A. The North American species of *Bembecinus* (Hymenoptera, Sphe-

cidae, Stizini). Amer. Midl. Nat., Notre Dame **44** 1950 pp. 699–713, 6 figs.

1645.—Kruger, E. Phänoanalytische Studien an einigen Arten der Untergattung *Terrestribombus* O. Vogt (Hymen. Bomb.) I. Teil. Tijdschr. Ent., Amsterdam **93** (1950) 1951 pp. 141–197, 22 figs.

1646.—Kruseman, G. Note sur quelques races de *Bombus agrorum* (F.) nec Gmel. Ent. Ber., Amsterdam **13** 1950 pp. 43–47. [Hym.]

1647.—Kruseman, G. Is *Bombus agrorum romanoides* Krug. a relict from Doggersland? Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 427–428. [Hym.]

1648.—Kryger, J. P. The European Mymaridae comprising the genera known up to c. 1930. Ent. Medd., Copenhagen **26** 1950 pp. 1–96, 44 figs. [Hym.]

1649.—Kryński, S. & Woyciechowska, S. Investigations into the problem of artificial feeding of lice by way of intrarectal injections as applied by Weigl. Bull. Inst. mar. trop. Med. Gdańsk **2** 1949 pp. 59–60. [Anopl.]

Kuan, Chih-hu see Luh & Kuan.

1650.—Kugler, H. Der Blütenbesuch der Schlammfliege (*Eristalomyia tenax*). Z. vergl. Physiol., Berlin **32** 1950 pp. 328–347, 2 figs. [Dipt.]

1651.—Kühn, A. & An, M. Elektronenoptische Untersuchungen über den Bau von Schmetterlingschuppen. Biol. Zbl., Leipzig **65** 1946 pp. 30–40, 11 figs. [Lep.]

1652.—Kühnelt, W. Bodenbiologie. Vienna, Verlag Herold 1950 368 pp. 3 pls. 63 figs.

1653.—Kühnelt, W. Die Leitformenmethode in der Ökologie der Landtiere. Biol. gen., Vienna **17** 1943 pp. 106–146, 3 figs.

1654.—Kühnelt, W. Der Kopulationsapparat der Schmetterlinge und seine Bedeutung für die Systematik. Ent. NachrBl. öst. schweiz. Ent., Vienna **2** 1950 pp. 46–48, 69–72, 4 figs. [Lep.]

- 1655.—Kullenberg, B. Observations sur *Ophrys* et les insectes. Bull. Soc. Sci. nat. Maroc, Rabat **28** (1948) 1950 pp. 138–141, 1 pl.
- 1656.—Kult, K. New neotropical species of group Clivinina (Carab. Col.). Acta Soc. ent. Čsl., Prague **47** 1950 pp. 129–149.
- 1657.—Kult, K. New neotropical species of the group Ardistominina (Carabidae, Col.). xix. Arthropoda, Buenos Aires **1** 1950 pp. 299–325.
- 1658.—Kulzer, H. 3. Beitrag zur Kenntnis der Tenebrioniden. Ent. Arb., München **1** 1950 pp. 9–46, 1 pl. [Col.]
- 1659.—Kulzer, H. Revision der Gattung *Spinamarygmus* Pic (Col. Amarygmini, Tenebr.). Mitt. münch. ent. Ges., Munich **40** 1950 pp. 306–314, 6 figs.
- 1660.—Kurir, A. *Pipiza festiva* Meig. u. *Heringia virens* Fabr. räuberische Syrphiden auf *Pemphigus spirothecae* Pass. Wien. ent. Rdsch., Vienna **1** 1949 no. 3 pp. 1–4; **2** 1950 pp. 5–10, 1 pl. [Dipt., Hem.]
- 1661.—Kuroda, Y. Immature stages of *Olenecamptus formosanus* Pic, with notes on its habits (Coleoptera, Cerambycidae). [In Japanese.] Ent. Rev. Japan, Osaka **5** 1950 pp. 41–46, 8 figs.
- 1662.—Kurosawa, Y. Notes on the synonymy of several Japanese Buprestid beetles of the genera *Cryptodactylus* and *Toxoscelus*. [In Japanese with English summary.] Ent. Rev. Japan, Osaka **5** 1950 pp. 27–30. [Col.]
- Kurosawa, Y. see Chūjō & Kurosawa.
- 1663.—Kuschel, G. Los Curculionidae del extremo norte de Chile (Coleoptera, Curcul. ap. 6^o). Acta zool. illoana, Tucuman **8** 1949 pp. 1–54, 3 pls.
- 1664.—Kuschel, G. Nuevas sinonimias revalidaciones y combinaciones (9^o aporte a Col. Curculionidae). Agric. tecn., Santiago de Chile **10** 1950 pp. 10–21.
- 1665.—Kuschel, G. Nuevos Brachyderinae y Magdalinae chilenos (Coleoptera Curculionidae) (Aporte 5^o). Arthropoda, Buenos Aires **1** 1950 pp. 181–195, 1 pl. 5 figs.
- 1666.—Kuschel, G. Los Curculionidae de Tarapaca y Antofagasta (Insecta, Coleoptera). Invest. zool. chilenas, Santiago de Chile **1** 1950 fasc. 1 pp. 13–14. [Col.]
- 1667.—Kuschel, G. Die Gattung *Priocyphus* Hust. 1939. Rev. Ent., Rio de Janeiro **21** 1950 pp. 545–550.
- 1668.—Kusnezov, N. Sobre la reproducción de las formas sexuales en *Solenopsis patagonica* Emery (Hymenoptera, Formicidae). Acta zool. illoana, Tucuman **8** 1949 pp. 281–290.
- 1669.—Kusnezov, N. *Pogonomyrmex* del grupo *Ephedomyrmex* en la fauna de la Patagonia (Hymenoptera, Formicidae). Acta zool. illoana, Tucuman **8** 1949 pp. 291–307, 2 figs.
- 1670.—Kusnezov, N. El género *Cyphomyrmex* (Hymenoptera, Formicidae) en la Argentina. Acta zool. illoana, Tucuman **8** 1949 pp. 427–456, 2 pls.
- 1671.—Kusnezov, N. *Crematogaster (Neocrema) descolei* n. sp. (Hymenoptera, Formicidae). Acta zool. illoana, Tucuman **8** 1949 pp. 587–590, 1 pl. 4 figs.
- 1672.—Kutter, U. Ueber eine neue, extrem parasitische Ameise. I. Mitteilung. Mitt. schweiz. ent. Ges., Berne **23** 1950 pp. 81–94, 23 figs. [Hym.]
- 1673.—Kutter, H. Über zwei neue Ameisen. Mitt. schweiz. ent. Ges., Berne **23** 1950 pp. 337–346. [Hym.]
- 1674.—Kutter, H. Ueber *Doromyrmex* und verwandte Ameisen. 2. Mitteilung. Mitt. schweiz. ent. Ges., Berne **23** 1950 pp. 347–353. [Hym.]
- Kutter, H. see Stumper & Kutter.
- 1675.—Kuyp, E. van der. Contribution to the study of the malarial epidemiology in Surinam. Meded. K. Ver. indisch Inst., Amsterdam no. 89 1950 146 pp. 4 diagr. [Dipt.]

1676.—**Labeyrie, V. & Pons, R.** Sur l'importance de l'hygrométrie dans l'éthologie de la mouche de l'oignon (*Chortophila antiqua* Meigen). C.R. Acad. Sci., Paris **230** 1950 pp. 1983-1984. [Dipt.]

1677.—**Lachmaier, J.** Species and races of malaria mosquitoes occurring on the coast of the Gulf of Gdańsk. Bull. Inst. mar. trop. Med. Gdańsk **2** 1949 pp. 91-94 1 map. [Dipt.]

1678.—**Ladeiro, J. M.** Braguídeos, Antribídeos, Brentídeos e Nemoníquídeos portugueses do Museu Zoológico de Universidade de Coimbra. Mem. Estud. Mus. zool. Coimbra no. **199** 1950 10 pp. [Col.]

1679.—**Ladeiro, J. M.** Os Lamelícérnios portugueses do Museu Zoológico da Universidade de Coimbra. Mem. Estud. Mus. zool. Univ. Coimbra no. **196** 1950 27 pp. [Col.]

1680.—**Lafon, M.** Recherches sur l'utilisation des réserves vitellines au cours de l'embryogénèse II. Données sur un insecte : *Carausius (Dixippus) morosus* (Br. et Redt.). Arch. int. Physiol., Paris & Liège **57** 1950 pp. 309-342. [Orth.]

1681.—**Lagar, A.** Notas sobre Dytiscidae. Descripción de una nueva variación de *Laccophilus hyalinus* De Geer. Graellsia, Madrid **7** 1949 pp. 23-24. [Col.]

1682.—**Lagar, A.** Los hidrocántaros de Vallvidrera (Barcelona). Graellsia, Madrid **7** 1949 pp. 51-56. [Col.]

1683.—**Lageralm, G., Philip, B. & Gralén, N.** Occurrence of a network in the excrement from the larva of the clothes moth. Nature, London **166** 1950 pp. 484-485, 3 figs. [Lep.]

1684.—**Lagerspetz, K.** On the occurrence of *Oryctes nasicornis* L. (Col., Scarabaeidae) in Finland from 1938-1949. [In Finnish with English summary.] Ann. ent. fenn., Helsinki **16** 1950 pp. 125-128.

1685.—**La Greca, M.** Mantodei africani del Museo di Storia Naturale di Genova. Ann. Mus. Stor. nat., Genova **64** 1950 pp. 268-284, 4 figs. [Orth.]

1686.—**La Greca, M.** L'evoluzione delle pleure pterotoraciche degli Insetti Blattotteroidi. Boll. Zool., Turin **16** 1949 pp. 119-129, 3 figs. [Orth.]

1687.—**Laidlaw, F. F.** A survey of the Chlorocyphidae (Odonata: Zygoptera), with diagnoses of proposed new genera, and description of a new geographical subspecies. Trans. R. ent. Soc. London **101** 1950 pp. 257-280, 8 figs.

1688.—**Lal, R.** Biological observations on *Creontiades pallidifer* Walker (*Megacoelum stramineum* Walker), with notes on various insect pests on potato at Delhi. Indian J. Ent., New Delhi **10** (1948) 1950 pp. 267-278, 2 pls. [Hem.]

1689.—**Lallemand [V.]** Nouveaux Homoptères de l'Ouest africain. Bull. Inst. franç. Afr. noire, Dakar **12** 1950 pp. 630-633.

1690.—**Lallemand, V.** Contribution à l'étude de l'Air. Hémiptères Fulgoroidea. Mém. Inst. franç. Afr. noire, Paris no. 10 1950 pp. 314-315, 1 fig.

1691.—**Lallemand, V.** Contribution à l'étude des Homoptères de Madagascar. Mém. Inst. sci. Madagascar, Tananarive **4A** 1950 pp. 83-96, 5 figs.

1692.—**Lallemand, V.** Description de quelques nouveaux Eurybrachides (Homoptera). Rev. franç. Ent., Paris **17** 1950 pp. 149-152.

Lambers see Hille Ris Lambers.

1693.—**Lamont, Sir N. & Callan, E. McC.** Moths new to Trinidad, B.W.I. Zoologica, New York **35** 1950 pp. 197-207. [Lep.]

1694.—**Lamprecht, H.** Zwei für Schweden neue Carabiden, *Amara anthobia* Villa und *Harpalus signatocornis* Dft., sowie über durch Trocknis bedingte Flucht von Carabiden. Opusc. ent., Lund **15** 1950 pp. 87-96, 1 fig. [Col.]

1695.—**Landin, B. O.** Entomological results from the Swedish expedition 1934 to Burma and British India. Coleoptera: Lamellicornia. Fam. Scarabaeidae collected by René Malaise. Ark. Zool., Stockholm (2) **1** 1950 no. 2, pp. 3-9, 1 pl. 3 figs.

- 1696.—Lane, F. Cerambycoidea neotropica nova. I. Dusenia, Curitiba **1** 1950 pp. 91–104, 1 pl. [Col.]
- 1697.—Lane, F. Sobre os tipos e a sinonímia de alguns Canthonini (Col. Scarabaeidae). III. Nota sobre a data certa de *Canthon laevis* Drury. Papéis avulsos Dep. Zool. S. Paulo **9** 1950 pp. 79–82.
- 1698.—Lane, J. Sinonimias en *Culicoides guttatus* (Coquillett, 1904). Bol. Ent. venezol., Caracas **8** (1949) 1950 pp. 115–117. [Dipt.]
- 1699.—Lane, J. Neotropical Ceroplatinae (Diptera, Mycetophilidae). Dusenia, Curitiba **1** 1950 pp. 32–69, 22 figs., 139–144, 4 figs.
- 1700.—Lane, J. New Brazilian *Leia* Meigen, 1818 (Diptera, Mycetophilidae). Rev. Brasil. Biol., Rio de Janeiro **10** 1950 pp. 121–131, 17 figs.
- 1701.—Lane, J. & Coher, E. I. The genus *Schnusea* Edwards, 1933 (Diptera, Mycetophilidae, Sciophilinae). Rev. Brasil. Biol., Rio de Janeiro **10** 1950 pp. 279–283, 12 figs.
- Lane, J. see Shaw & Lane.
- Lane, J. E. see Pratt & Lane.
- 1702.—Laneyrie, R. Le *Troglorites ochsi* Fagn. et ses races (Col. Pterostichidae). Publ. Mus. Hist. nat., Paris no. 11 1948 pp. 85–87, 1 map.
- 1703.—Laneyrie, R. & Ochs, J. Etude sur les *Duvalius ochsi* Dodero et *brujasi* Deville. Publ. Mus. Hist. nat., Paris no. 11 1948 pp. 61–84, 6 figs. [Col.]
- 1704.—Lange, Jr., W. H. Biology and systematics of plume moths of the genus *Platyptilia* in California. Hilgardia, Berkeley **19** 1950 pp. 561–668, 16 pls. 8 figs. [Lep.]
- 1705.—Lange, Jr., W. H. The biology of the Mariana coconut beetle, *Brontispa mariana* Spaeth, on Saipan, and the introduction of parasites from Malaya and Java for its control. Proc. Hawaii. ent. Soc., Honolulu **14** (1949) 1950 pp. 143–162, 4 figs. [Col.]
- 1706.—Lanza, B. La *Nycteribosca africana* (Walker) nell' Italia peninsulare (Diptera-Pupipara). Mem. Soc. ent. ital., Genova **29** 1950 p. 96.
- 1707.—La Rivers, I. A new Naucorid genus and species from Nevada (Hemiptera). Ann. ent. Soc. Amer., Columbus **43** 1950 pp. 368–373, 1 fig.
- 1708.—La Rivers, I. Hydradephagous Coleoptera of the Nevada area, exclusive of the Dytiscidae. Bull. S. Calif. Acad. Sci., Los Angeles **48** (1949) 1950 pp. 129–140.
- 1709.—La Rivers, I. The Staphylinoid and Dascilloid aquatic Coleoptera of the Nevada area. Great Basin Nat., Provo **10** 1950 pp. 66–70. [Col.]
- 1710.—La Rivers, I. The meeting point of *Ambrysus* and *Pelocoris* in Nevada (Hemiptera : Naucoridae). Pan-Pacif. Ent., San Francisco **26** 1950 pp. 19–21.
- 1711.—La Rivers, I. A new species of the genus *Potamocoris* from Honduras (Hemiptera, Naucoridae). Proc. ent. Soc. Washington **52** 1950 pp. 301–304, 1 fig.
- 1712.—La Rivers, I. The Dryopoidea known or expected to occur in the Nevada area (Coleoptera). Wasmann J. Biol., San Francisco **8** 1950 pp. 97–111.
- 1713.—Larsén, O. Die Veränderungen im Bau der Heteropteren bei der Reduktion des Flugapparates. Opusc. ent., Lund **15** 1950 pp. 17–51, 10 figs.
- 1714.—Larsén, O. Einige Beobachtungen an *Gerris lacustris* L. (Hem. Het.). Opusc. ent., Lund **15** 1950 pp. 131–133.
- 1715.—Larsén, O. Die dorsoventralen Muskeln im Pterothorax der Neuropteroiden Insekten. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 557–560.
- 1716.—Last, H. R. New species of Coleoptera (Staphylinidae) from South Africa. Ent. mon. Mag., London **86** 1950 pp. 136–137.
- 1717.—Last, H. R. *Xantholinus meridionalis* (Nordmann) (Col., Staphylinidae) a species new to the British list. Ent. mon. Mag., London **86** 1950 pp. 138–140, 2 figs.
- 1718.—Laurence, B. R. Predators and prey. Bedford Nat. no. 4 (1949) 1950 pp. 27–30.

Laurent, J. see Gaud & Laurent.

1719.—Laurentiaux, D. O corênicia de Blatídos do género *Eneriblatta* Teix. no estefaniano de Saint-Eloy-Les-Mines (França). Bol. Soc. geol. Portugal, Porto **8** 1949 pp. 121–127, 4 pls. 1 fig. [Foss., Orth.]

1720.—Laurentiaux, D. & Teixeira, C. Découverte d'un *Blattinopsis* dans le carbonifère du Bas-Douro (Portugal). Bol. Soc. geol. Portugal, Porto **7** 1948 pp. 165–166, 1 pl. [Foss., Orth.]

1721.—Laven, H. Der Schuppenindex als Unterscheidungsmerkmal der Arten in der *Anopheles maculipennis*-Gruppe. Z. Tropenmed., Stuttgart **2** 1950 pp. 111–124, 5 figs. [Dipt.]

1722.—Lawson, F. A. Biology of *Gastrophysa cyanea* Melsh. (Coleoptera: Chrysomelidae). Ohio J. Sci., Columbus **50** 1950 pp. 221–228, 2 pls. 1 fig.

1723.—Le Berre, J. R. Action des facteurs climatiques sur l'incitation au vol du Doryphore. C.R. Acad. Sci., Paris **231** 1950 pp. 1096–1098. [Col.]

Lebied, B. see Wanson & Lebied.

1724.—Le Calvez, J. Structure et comportement des chromosomes de *Drosophila immigrans* Sturt. Ann. Sci. nat., Paris (11) **11** 1949 pp. 237–253, 1 pl. 3 figs. [Dipt.]

1725.—Lechanteur, F. Contribution à l'étude de l'Air. Coléoptères Clavicornes. Mém. Inst. franç. Afr. noire, Paris no. 10 1950 p. 182.

1726.—Le Charles, L. Contribution à l'étude des *Zygaena*. Rev. franç. Lépidopt., Paris **12** (1949) 1950 pp. 178–180.

1727.—Leclercq, J. Influence de l'humidité sur la survie de quelques Coléoptères adultes. Ann. Soc. zool. Belg., Brussels **77** (1946) 1947 pp. 48–55, 1 graph.

1728.—Leclercq, J. Importance des glucides dans la nutrition des larves de *Tenebrio molitor* L. Arch. int. Physiol., Paris & Liège **56** 1948 pp. 28–34. [Col.]

1729.—Leclercq, J. Métabolisme de l'eau chez un insecte à régime alimentaire sec, *Tenebrio molitor*. Arch. int. Physiol., Paris & Liège **56** 1948 p. 110. [Col.]

1730.—Leclercq, J. Aspects qualitatifs des besoins en glucides chez *Tenebrio molitor* L. Arch. int. Physiol., Paris & Liège **56** 1948 pp. 130–133. [Col.]

1731.—Leclercq, J. La biotine, facteur de croissance pour *Tenebrio molitor* L. Arch. int. Physiol., Paris & Liège **57** 1949 pp. 67–70. [Col.]

1732.—Leclercq, J. Nouvelles recherches sur la physiologie de l'inanition chez *Tenebrio molitor* L. Arch. int. Physiol., Paris & Liège **57** 1949 pp. 173–184, 2 figs.

1733.—Leclercq, J. La vitamine T, facteur de croissance pour les larves de *Tenebrio molitor*. Arch. int. Physiol., Paris & Liège **57** 1950 pp. 350–352. [Col.]

1734.—Leclercq, J. Sur les Crabroniens orientaux et australiens rangés par R. E. Turner (1912–1915) dans le genre *Crabro* (subgenus *Solenius*). Bull. Ann. Soc. ent. Belg., Brussels **86** 1950 pp. 191–198. [Hym.]

1735.—Leclercq, J. Sur quelques Crabroniens (Hymenoptera Sphecidae) du groupe *Lindenius-entomognathus*. Bull. Inst. Sci. nat. Belg., Brussels **26** 1950 no. 6, 8 pp.

1736.—Leclercq, J. Notes systématiques sur les Crabroniens pédonculés (Hymenoptera Sphecidae). Bull. Inst. Sci. nat. Belg., Brussels **26** 1950 no. 15 19 pp.

1737.—Leclercq, J. Contribution à l'étude des Crabroniens asiatiques appartenant au genre *Ectemnius* (Dahlbom, 1845) (Hymenoptera, Sphecidae). Bull. Inst. Sci. nat. Belg., Brussels **26** 1950 no. 23, 12 pp.

1738.—Leclercq, J. Remarques sur les *Crossocerus* du sous-genre *Blepharipus* Lepeletier et Brullé, 1834 (syn. *Acanthocrabro* Perkins, 1913) (Hym. Sphecidae Crabroninae). Bull. Inst. Sci. nat. Belg., Brussels **26** 1950 no. 28, 10 pp.

1739.—Leclercq, J. Crabroniens nouveaux ou peu connus (Hymenoptera Sphecidae). Bull. Inst. Sci. nat. Belg., Brussels **26** 1950 no. 35, 19 pp.

1740.—Leclercq, J. Description d'une espèce nouvelle d'*Entomocrabo* (Hym. Sphecidae) de la République d'Équateur. Bull. Soc. ent. France, Paris **55** 1950 pp. 93–94.

1741.—Leclercq, J. Occurrence of pterin pigments in Hymenoptera. Nature, London **165** 1950 pp. 267–268.

1742.—Leclercq, J. Ecologie et physiologie des populations de *Tenebrio molitor* L. (Insecte, Coléoptère). Physiol. comp. oecol., The Hague **2** 1950 pp. 161–180, 17 figs.*

1743.—Leclercq, J. Sur quelques facteurs qui conditionnent la variabilité de la taille chez *Tenebrio molitor* L. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 236–238. [Col.]

1744.—Leclercq, J. Les *Ectemnius* sud-américains du sous-genre *Apocetemnius* (Hymenoptera, Sphecidae, Crabroninae). Rev. franç. Ent., Paris **17** 1950 pp. 200–210.

Leclercq, J. see Florkin, Duchâteau & Leclercq.

1745.—Leclercq, M. Les "Oestrides" du Musée Zoologique de Strasbourg (Diptera). Bull. Ann. Soc. ent. Belg., Brussels **86** 1950 pp. 55–56.

1746.—Leclercq, M. & Théodoridès, J. Some parasites of birds and mammals observed recently in France. Ent. mon. Mag., London **86** 1950 p. 74.

1747.—Lecomte, J. Attraction entre reine et ouvrières d'abeilles (*Apis mellifica*). C.R. Acad. Sci., Paris **231** 1950 pp. 802–804. [Hym.]

1748.—Lecomte, J. Sur le déterminisme de la formation de la grappe chez les abeilles. Z. vergl. Physiol., Berlin **32** 1950 pp. 499–506, 5 figs. [Hym.]

1749.—Lederer, G. Aufreten von *Cimex hemipterus* Fabricius 1803 = *C. rotundatus* Sign. sowie anderer Cimexarten in Hessen (Heteropt. Cimicidae). Anz. Schädlingsk., Berlin **23** 1950 pp. 44–46, 4 figs.

1750.—Lee, H. Tsui-Ying. A preliminary histological study of the insemination reaction of *Drosophila gibberosa*. Biol. Bull., Lancaster, Pa. **98** 1950 pp. 25–33. [Dipt.]

1751.—Leech, H. B. New species and subspecies of Nearctic water beetles (Coleoptera : Dytiscidae and Hydrophilidae). Wasmann Collector, San Francisco **7** (1949) 1950 pp. 243–256, 6 figs.

1752.—Leeder, F. Eine neue *Phytodecta* aus den Ostalpen (Coleopt. Chrysomelidae). Z. wien. ent. Ges., Vienna **35** 1950 pp. 21–22, 4 figs.

1753.—Leeds, H. A. British aberrations of the gatekeeper butterfly, *Maniola tithonus* (Linnaeus 1771); meadow crown butterfly, *Maniola jurtina* (Linnaeus 1758); and the small heath butterfly, *Coenonympha pamphilus* (Linnaeus 1758). Trans. S. London ent. nat. Hist. Soc. **1948-49** 1950 pp. 80–122, 4 col pls.; postscript **1949-50** 1951 pp. 81–82. [Lep.]

1754.—Lees, A. D. Entomology. Sci. Progr., London no. 150 1950 pp. 335–341.

1755.—Lees, A. D. The physiology of diapause. Sci. Progr., London no. 152 1950 pp. 735–742.

1756.—Leeson, H. S., Lumsden, W. H. R., Yofe, J. & Macan, T. T. *Anopheles* and malaria in the Near East. Mem. Ser. Lond. Sch. Hyg. trop. Med. no. 7 1950 xii & 223 pp. 73 figs. 1 map.

1757.—Lefevre, jr., G. X-ray induced genetic effects in germinal and somatic tissue of *Drosophila melanogaster*. Amer. Nat., Lancaster, Pa. **84** 1950 no. 818 pp. 341–365, 1 fig. [Dipt.]

1758.—Legay, J. M. Note sur l'évolution des *Corpora allata* au cours de la vie larvaire de *Bombyx mori*. C.R. Soc. Biol., Paris **144** 1950 pp. 512–513. [Lep.]

1759.—Legrand, H. Chasse et préparation des lépidoptères de petite taille. Bull. trim. Union Soc. franç. Hist. nat., Versailles no. 1 1950 pp. 2–8.

1760.—**Legros, C.** Contribution à l'étude de l'Air. Coléoptères Hydrophilidae et Hydraenidae. Mém. Inst. franç. Afr. noire, Paris no. 10 1950 pp. 215–218.

1761.—**Legros, C.** Un Laccophilinae nouveau de Madagascar (Col. Dytiscidae). Nat. malgache, Tananarive 2 1950 pp. 53–55, 2 figs.

1763.—**Leiler, T. E.** Bestimmungstabelle der schwedischen Lycanidenlarven (Col.). Opusc. ent., Lund 15 1950 pp. 157–160, 10 figs.

1764.—**Lejeune, R. R.** The effect of jack-pine staminate flowers on the size of larvae of the jack-pine budworm, *Choristoneura* sp. Canad. Ent., Guelph 82 1950 pp. 34–43, 2 figs. [Lep.]

1765.—**Lejeune, R. R. & Black, W. F.** Populations of larvae of the jack pine budworm. For. Chron., Toronto 26 1950 no. 2 repr. 5 pp. 1 fig. [Lep.]

1766.—**Leleup, N.** Considérations sur l'éthologie et la dispersion actuelle des Anophèles cavernicoles du Congo belge. Rev. Zool. Bot. afr., Brussels 43 1950 pp. 353–355. [Dipt.]

1767.—**Leleup, N. & Lips, M.** Un Anophèle cavernicole nouveau du Katanga: *Anopheles rodhaini* n. sp. Rev. Zool. Bot. afr., Brussels 43 1950 pp. 303–308, 3 figs. [Dipt.]

1768.—**Lempke, B. J.** Een opvallende reactie van *Pieris*-wifjes. Ent. Ber., Amsterdam 13 1950 pp. 20–21.

1769.—**Lempke, B. J.** Nomenclatuur. Ent. Ber., Amsterdam 13 1950 pp. 53–54.

1770.—**Lempke, B. J.** Trekvlinders in 1949. Ent. Ber., Amsterdam 13 1950 pp. 129–134, 147–153, 7 figs.

1771.—**Lempke, B. J.** The variation of *Philodoria potatoria*, L. Ent. Rec., London 62 1950 pp. 1–11. [Lep.]

1772.—**Lempke, B. J.** Catalogus der Nederlandse Macrolepidoptera. Tijdschr. Ent., Amsterdam 92 (1949) 1950 pp. 113–218, 47 figs.

1773.—**Lempke, B. J.** The migrating Macrolepidoptera of Holland in comparison with those of Great

Britain. Trans. S. London ent. nat. Hist. Soc. 1948–49 1950 pp. 148–158.

1774.—**Lengersdorf, F.** *Rhynchosciara leclercqi* (Dipt., Lycomiidae), a new species found in Belgium. Ent. mon. Mag., London 86 1950 p. 28.

1775.—**Leńkowa, A.** The structure of the female reproductive organs in some gonorrhistic and parthenogenetic species of the genus *Polydrosus* Germ. (Coleoptera, Curculionidae). Bull. int. Acad. Cracovie 1949 BII 1950 pp. 447–484, 17 figs.

1776.—**Lent, H.** Nova espécie de *Triatoma* Laporte, 1833 (Hemiptera, Reduviidae). Rev. brasil. Biol., Rio de Janeiro 10 1950 pp. 437–440, 4 figs.

1777.—**Lenz, F.** Zur Funktion der Tubuli und Analenschläuche der *Chironomus*-larven. Verh. dtsch. Zool. Kiel 1948, 1949 pp. 484–489, 4 figs. [Dipt.]

1778.—**Lenz, F.** Zur Biologie der Phlebotomen. Verh. dtsch. Zool. Mainz, Leipzig 1950 pp. 301–313, 3 figs. [Dipt.]

1779.—**Leonard, J. W.** A new *Baetis* from Michigan (Ephemeroptera). Ann. ent. Soc. Amer., Columbus 43 1950 pp. 155–159, 1 pl. 1 fig.

1780.—**Leone, C. A.** A serological study of some Invertebrata. C.R. 13e Congr. int. Zool. Paris 1948, 1949 pp. 425–429.

1781.—**Lepesme, P.** Longicornes récoltés au Liberia par P. L. Dekeyser et B. Holas. Bull. Inst. franç. Afr. noire, Dakar 12 1950 pp. 395–400, 1 fig. [Col.]

1782.—**Lepesme, P.** Lamiaires nouveaux de l'ouest africain (Col. Ceramb.) (2^e note). Bull. Mus. Hist. nat., Paris (2) 22 1950 pp. 92–94.

1783.—**Lepesme, P.** Cérambyciaires nouveaux de Côte d'Ivoire (Col. Cerambycidae). Bull. Soc. ent. France, Paris 55 1950 pp. 62–64, 2 figs.

1784.—**Lepesme, P.** Un nouveau genre de Tragocephalini (Col. Cerambycidae). C.R. 13e Congr. int. Zool. Paris 1948, 1949 pp. 473–474.

- 1785.—Lepesme, P. Les *Chromalizus* (Callichromini). Longicornia, Paris 1 1950 pp. 1-23, 2 figs.
- 1786.—Lepesme, P. Longicornes peu connus de l'ouest africain. Longicornia, Paris 1 1950 pp. 557-561, 8 figs.
- 1787.—Lepesme, P. Sur la dispersion par l'homme et l'acclimatation de quelques "Phoracanthini." Longicornia, Paris 1 1950 pp. 577-579, 2 figs.
- 1788.—Lepesme, P. Sur quelques localités de l'ouest africain riches en Longicornes. Longicornia, Paris 1 1950 pp. 581-585, 1 map.
- 1789.—Lepesme, P. Notes Longicornesques. Longicornia, Paris 1 1950 pp. 587-590, 5 figs.
- 1790.—Lepesme, P. Les *Litopus* (Col. Cerambycidae). Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 147-151.
- 1791.—Lepesme, P. Sur la discrimination des formes indigènes et des formes importées dans les catalogues faunistiques. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 993-994.
- 1792.—Lepesme, P. & Breuning, S. Les Tragocephalini de l'ouest africain. Longicornia, Paris 1 1950 pp. 423-506, 1 col. pl. 15 figs.
- Lerma see De Lerma.
- 1793.—Lesse, H. de. Quelques indications sur *Melitaea britomartis* Assm., espèce à rechercher en France. Bull. Soc. linn. Lyon 19 1950 pp. 38-40. [Lep.]
- 1794.—Lesse, H. de. Deuxième note sur le genre *Melitaea*; *M. trivia* Denis et Schiffermüller. Bull. Soc. linn. Lyon 19 1950 pp. 73-74, 2 figs. [Lep.]
- 1795.—Lesse, H. de. Coléoptères de Groenland. Expédition polaire française. Zoologie (3^e note). Entomologiste, Paris 6 1950 pp. 73-76.
- 1796.—Lesse, H. de. Observations sur l'époque d'apparition et le comportement des Lépidoptères du Groenland occidental et remarques sur leur homochromie. Rev. franç. Lépidopt., Paris 12 (1949) 1950 pp. 163-169, 1 pl.
- 1797.—Lesse, H. de. Notes zoologiques et botaniques sur l'ouest du Groenland. Terre et la Vie, Paris 97 1950 pp. 175-201, 3 pls.
- 1798.—Levenbook, L. The composition of horse bot fly (*Gastrophilus intestinalis*) larva blood. Biochem. J., Cambridge 47 1950 pp. 336-346, 2 figs. [Dipt.]
- 1799.—Levenbook, L. The physiology of carbon dioxide transport in insect blood. Parts I, III. J. exp. Biol., London 27 1950 pp. 158-174, 2 figs., 184-191, 3 figs. [Dipt.]
- 1800.—Levenbook, L. & Clark, A. M. The physiology of carbon dioxide transport in insect blood. Part II. The effect of insect blood on the rate of hydration of CO₂. J. exp. Biol., London 27 1950 pp. 175-191, 3 figs. [Dipt.]
- 1801.—Levene, H. A new measure of sexual isolation. Evolution, Lancaster, Pa. 3 (1949) 1950 pp. 315-321. [Dipt.]
- 1802.—[Levinson, L. B. & Platonova, G. N.] Neurosecretory cells of the honey bee. [In Russian.] C.R. Acad. Sci. URSS, Moscow (N.S.) 60 1948 pp. 129-132, 4 figs. [Hym.]
- Levy, G. see Busnel, Levy & Polonovski.
- 1803.—Lewacki, J. Contribution to the knowledge of the butterfly fauna (Macrolepidoptera) of Cracow and environs. [In Polish with English summary.] Polsk. Pismo ent., Wrocław 19 (1949) 1950 pp. 324-326.
- 1804.—Lewis, D. J. A peritrophic membrane in *Simulium*. Nature, London 165 1950 p. 978. [Dipt.]
- Lewis, D. J. see Kirk & Lewis.
- 1805.—Lewke, J. Zur Kenntnis der Wachsdrüsen der Honigbiene. Anat. Anz., Jena 97 1950 pp. 265-268, 1 fig. [Hym.]
- 1805A.—L'Hélias, C. Etude des glandes endocrines postcérébrales de la larve d'*Apis mellifica* (Hyménoptère). Bull. Soc. zool. France, Paris 75 1950 pp. 70-74, 3 figs.
- 1806.—Lhoste, J. Sur quelques aspects cytologiques et histochimiques des oenocytes de *Forficula auricularia* L. imago. Bull. Soc. zool. France, Paris 76 1950 pp. 162-163. [Dermapt.]

Lhoste, J. *see Arvy, Gabe & Lhoste.*

1807.—**Liebermann**, J. Síntesis de *Sinipta*, Stål, 1873, con la descripción de una nueva especie argentina, *S. hectorisperonii* (Orth., Acrid., Acridinae). [Publ. Inst. Sanid. veg.] Minist. Agric. argent., Buenos Aires (A) 6 no. 52 1950 pp. 3–16, 8 figs.

1808.—**Liebermann**, J. Sobre una colección de Acridoideos neotropicales del Dr. Richard Ebner, con la descripción del alotipo de *Diponthus bilineatus* Rehn (Orthoptera, Acridoidea). Rev. brasil. Biol. Rio de Janeiro 10 1950 pp. 133–139.

1809.—**Lieftinck**, M. A. Losse aantekeningen over de biologie van bidsprinkhanen (Orth., Mantoidea). Idea, Bogor (Buitenzorg) 8 1950 pp. 19–24, 3 figs.

1810.—**Lieftinck**, M. A. Additions to the Odonate fauna of south east Asia, with descriptions of two new genera and three new species. Treubia, Buitenzorg 20 1950 pp. 631–645, 9 figs.

1811.—**Lieftinck**, M. A. Further studies on southeast Asiatic species of *Macromia* Rambur, with notes on their ecology, habits and life history, and with descriptions of larvae and two new species (Odon., Epophthalmiinae). Treubia, Buitenzorg 20 1950 pp. 657–716, 61 figs.

1812.—**Lieftinck**, M. A. Two new species of *Podolestes* Selys from Borneo with a key for the identification of the known species (Odonata, Megapodagriidae). Zool. Meded., Leiden 31 1950 pp. 39–47, 4 figs.

1813.—**Lienhart**, R. Nouvelles recherches sur la reine des abeilles (*Apis mellifica*). C.R. Soc. Biol., Paris 144 1950 pp. 1094–1096. [Hym.]

Lilly, J. H. *see Beck, Bilstad & Lilly*; *Beck, Lilly & Stauffer*.

Lima *see Costa Lima.*

Lima, F. O. *see Correa, Lima & Coda.*

1814.—**Lindberg**, H. Verzeichnis der Ostfennoskandischen Homoptera Cicadina. Fauna fenn., Helsingfors 1 1947 pp. 1–81, 1 map.

1815.—**Lindberg**, H. On stylopisation of Araeopids. Acta zool. fenn., Helsinki 57 1949 40 pp. 4 pls. [Col., Hem.]

1816.—**Lindberg**, H. Notes on the biology of Dryinids. Comment. biol., Helsingfors 10 1950 no. 15, 18 pp. 19 figs. [Hym.]

1817.—**Lindberg**, H. Om några hemipterar, som under senaste tid invandrat till Finland. Notul. ent., Helsinki 30 1949 pp. 49–54, 4 maps.

1818.—**Lindberg**, H. Ueber die Insekten der Küstengewässer des Baltischen Meeres. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 429–433.

1819.—**Lindenmann**, W. Untersuchungen zur postembryonalen Entwicklung schweizerischen Orchesellen. Rev. suisse Zool., Geneva 57 1950 pp. 353–428, 25 figs. [Collemb.]

1820.—**Lindner**, E. Einige parasitische Fliegen aus Bauten solitärer Bienen und Wespen. Mitt. Sammelst. Schmarotzerbestim., Aschaffenburg Heft 27 1950 p. 1. [Hym., Dipt.]

1821.—**Lindner**, E. Zwei neue afrikanische *Nemotelus*-Arten. Zool. Anz., Leipzig 141 1943 pp. 176–178, 2 figs. [Dipt.]

1822.—**Lindroth**, A. Periodische Ventilation bei der Larve von *Chironomus plumosus*. Zool. Anz., Leipzig 138 1942 pp. 244–247, 1 fig. [Dipt.]

1823.—**Lingonblad**, B. Neue Schmetterlingsformen. Notul. ent., Helsinki 29 (1949) 1950 pp. 79–82, 1 pl. [Lep.]

Linnard, C. E. *see Goodhue & Linnard.*

1824.—**Linnauvori**, R. Hemipterologisches aus Finland. I, II. Ann. ent. fenn., Helsinki 15 (1949) 1950 pp. 145–156, 5 figs. 1 map; 16 1950 pp. 182–188, 3 figs.

1825.—**Linnauvori**, R. Investigations on the Finnish water-bug fauna. [In Finnish with English summary.] Ann. ent. fenn., Helsinki 16 1950 pp. 63–71, 1 fig. 1 map. [Hem.]

1826.—**Linnavuori, R.** Weitere Beobachtungen zur Hemipterenfauna von Süd-Häme. [In Finnish with German summary.] Ann. ent. fenn., Helsinki **16** 1950 pp. 121–125.

1827.—**Linsley, E. G. & MacSwain, J. W.** New western species of Rhipiphoridae (Coleoptera). Wasemann J. Biol., San Francisco **8** 1950 pp. 229–239.

Linsley, E. G. see Hurd & Linsley.

Lips, M. see Leleup & Lips.

Lith see Van Lith.

1828.—**Liu, C. L.** Contribution to the knowledge of Chinese Coccinellidae. X. Occurrence of *Perilitus coccinellae* (Schrank), a parasite of adult Coccinellidae, in North China (Hymenoptera, Braconidae). Ent. News, Lancaster, Pa. **61** 1950 pp. 207–208.

1829.—[**Lobashev, M. E.**] The day and night rhythm of the feeding activity and growth of the larvae of the oak silkworm. [In Russian.] C.R. Acad. Sci. URSS, Moscow (N.S.) **71** 1950 pp. 801–804.

1830.—**Löberbauer, R.** Zur Verbreitung und Biologie von *Phytometra v-argenteum* Esp. Z. wien. ent. Ges., Vienna **35** 1950 pp. 61–68, 1 map. [Lep.]

1831.—**Løken, A.** Bumble bees in relation to *Aconitum septentrionale* in Western Norway (Eidfjord). Norsk ent. Tidsskr., Oslo **8** 1950 pp. 1–16, 8 figs. [Hym.]

Long, D. B. see Williams & Long.

1832.—**Longfield, C.** Notes on the British Odonata in 1949. Entomologist, London **83** 1950 pp. 125–127.

Lopes see Souza Lopes.

Loritz, J. see Thomas, M.

Lotto see De Lotto.

1833.—**Louveaux, J.** Observations sur le déterminisme de la récolte du pollen par les colonies d'abeilles (*Apis mellifica* L.). C.R. Acad. Sci., Paris **231** 1950 pp. 921–922. [Hym.]

Lozet, F. see Florkin, Lozet & Sarlet.

1834.—**Lucas, D.** Contribution à l'étude des Lépidoptères Nord-Africains. Bull. Soc. ent. France, Paris **55** 1950 pp. 141–144.

Lucca see De Lucca.

1835.—**Lucena, D. T. de.** Flebotomos de Pernambuco—I. *Flebotomus whitmani* e *F. intermedius* na zona da Mata e *F. longipalpis* no agreste do Estado de Pernambuco. An. Soc. Biol. Pernambuco **9** 1949 pp. 27–36, 3 pls. [Dipt.]

1836.—**Ludwig, D.** The metabolism of starved nymphs of the grasshopper, *Chortophaga viridifasciata* De Geer. Physiol. Zool., Chicago **23** 1950 pp. 41–47. [Orth.]

1837.—**Ludwig, D.** Changes in the distribution of nitrogen during starvation in the grasshopper, *Chortophaga viridifasciata* De Geer. Physiol. Zool., Chicago **23** 1950 pp. 208–213. [Orth.]

1838.—**Luh, Chin-jen.** A list of recorded species of Cochlidionidae Lepidoptera of China. Peking nat. Hist. Bull. **16** (1941) 1948 pp. 91–104.

1839.—**Luh, Chin-jen & Kuan, Chih-hu.** Keys to the Chinese genera of Pyralidae. [In Chinese with English summary.] Ann. ent. sinici, Peking **1** 1950 pp. 95–116, 27 figs. [Lep.]

1840.—**Lühmann, M.** Ueber fakultative Parthenogenese bei Blattkäfern. Verh. dtsch. Zool. Kiel 1948, 1949 pp. 44–49. [Col.]

Lumsden, W. H. R. see Leeson, Lumsden, Yofe & Macan.

1841.—**Luna de Carvalho, E.** Contribuição para o conhecimento dos Strepsípteros de Portugal. Mem. Estud. Mus. zool. Coimbra no. 197 1950 **8** [+3] pp. 2 pls. [Col.]

1841A.—**Luna de Carvalho, E.** Contribuições para o conhecimento dos Strepsípteros de Portugal (II nota). Mem. Estud. Mus. zool. Univ. Coimbra no. 201 1950 **5** pp. 1 pl. [Col.]

1841B.—**Luna de Carvalho, E.** Notas sobre alguns coleópteros adéfagos das colecções do Museu do Dundo (Caraboidae Isochaeta e Rhysodidea). Publ. cult. Mus. Dundo, Comp. Diam. Angola, Lisbon no. **7** 1950 pp. 59–67, 6 figs.

1842.—Lundblad, O. Die Arthropodenfauna von Madeira nach den Ergebnissen der Reise von Prof. Dr. O. Lundblad Juli—August 1935. XXXIII. Aquatile and semiaquatile Hemiptera. Ark. Zool., Stockholm **42A** 1950 no. 16 pp. 1–7, 1 pl. 4 figs.

1843.—Lundblad, O. Några reflexioner och randanmärkningar till C. H. Lindroths arbete "Die fennoskandinischen Carabiden III". Ent. Tidskr., Stockholm **71** 1950 pp. 27–32. [Col.]

1844.—Lundblad, O. Några skalbaggfynd från Öland. Ent. Tidskr., Stockholm **71** 1950 pp. 63–76, 3 figs. [Col.]

1845.—Lundblad, O. Några insektfynd från sommaren 1949. Ent. Tidskr., Stockholm **71** 1950 pp. 97–103, 1 fig.

1846.—Lundblad, O. Insektsfynd från Härjedalen. Ent. Tidskr., Stockholm **71** 1950 pp. 171–176, 1 fig.

1847.—Lundblad, O. En entomofaunistisk inventering av Fiby urskog Uppland. Fauna och Flora, Uppsala **1950** 1950 pp. 141–154, 5 figs. [Col.]

1848.—Lundblad, O. Studier över Insektafaunan i Fiby urskog. K. svenska VetenskAkad. Avhand. Natursk., Stockholm no. 6 1950 235 pp. 8 pls. 12 figs.

Lüning see Bonnier & Lüning.

1849.—Lupo, V. Studio biologico sull'*Anomala ausonia* var. *neapolitana* Reitt. Boll. Lab. Ent. agr. Portici **9** 1949 pp. 78–110, 7 figs. [Col.]

Ma, S. C. see Wray, Knowlton & Ma.

1850.—Maa, Tsing-chao. On some new Orussidae from Asia and Australia (Hymenoptera, Symphyta). Proc. R. ent. Soc. London (B) **19** 1950 pp. 29–34, 7 figs.

1851.—Maa, Tsing-chao. New or little known Chinese sawflies and woodwasps (Hymenoptera). Quart. J. Taiwan Mus. **3** 1950 pp. 14–21, 7 figs.

1852.—Macan, T. T. Descriptions of some nymphs of the British species of the genus *Baëtis* (Ephem.).

Trans. Soc. Brit. Ent., Bournemouth **10** 1950 pp. 143–166, 6 figs.

Macan, T. T. see Leeson, Lumsden, Yofe & Macan.

1853.—McComb, D. & Knowlton, G. F. Some Utah Coleoptera belonging to minor families. Utah agric. Exp. Sta., Logan Mimeogr. Ser. 369 1950 5 pp.

1854.—Macdonald, W. W. The larvae of *Mystacides azurea* L., *Cyrnus flavidus* McLachlan and *Oxyethira simplex* Ris (Trichoptera). Proc. R. ent. Soc. London (A) **25** 1950 pp. 19–28, 12 figs.

1855.—McDunnough, J. H. Species of *Euxoa* of eastern North America, with particular reference to genitalic characters (Lepidoptera, Phalaenidae). Bull. Amer. Mus. nat. Hist., New York **95** 1950 pp. 355–408, 11 figs.

1856.—MacGill, E. I. The late nymphal stages of *Stollia fabricii* Kirk. (Hem., Pentatomidae). Ent. mon. Mag., London **86** 1950 pp. 302–303, 3 figs.

1857.—MacGillavry, D. Monstrositeiten bij insecten, niet uit kweek geboren. Ent. Ber., Amsterdam **13** 1950 p. 76.

1858.—McGuffin, W. C. Descriptions of larvae of forest insects. *Plagodis*, *Anagoga*, *Hyperetis* (Lepidoptera: Geometridae). Canad. Ent., Guelph **82** 1950 pp. 205–210, 1 fig.

1859.—Machado, R. S. Algumas considerações sobre os *Tabanus* de Moçambique. Gaz. Agric., Moçambique **2** 1950 pp. 269–271. [Dipt.]

1860.—McKenzie, H. L. The genera *Lindingaspis* MacGillivray and *Marginaspis* Hall (Homoptera: Coccoidea: Diaspididae). Micro-entomology, Stanford Univ. **15** 1950 pp. 98–124, 15 figs.

1861.—McKeown, K. C. Catalogue of the Cerambycidae (Coleoptera) of Australia. Mem. Aust. Mus., Sydney no. 10 1947 190 pp.

1862.—Mackerras, I. M. The zoogeography of the Diptera. Aust. J. Sci., Sydney **12** 1950 pp. 157–161.

1863.—Mackerras, I. M. Marine insects. Proc. roy. Soc. Qd., Brisbane **61** 1950 pp. 19–29.

- 1864.—**Mackerras**, M. J. & I. M. Notes on Australasian Simuliidae (Diptera). II. Proc. Linn. Soc. N.S.W., Sydney **75** 1950 pp. 167–187, 15 figs.
- 1865.—**McKey-Fender**, D. Notes on *Cantharis* III (Coleoptera: Cantharidae). Pan-Pacif. Ent., San Francisco **26** 1950 pp. 25–33, 61–79.
- 1866.—**McLane**, W. M. & **Nelson**, G. E. Notes on an apparent "rain" of organic matter in Florida. Quart. J. Florida Acad. Sci. **12** (1949) 1950 no. 3 pp. 203–206, 1 fig. [Dipt.]
- McMahon**, J. see Someren & McMahon.
- 1867.—**MacNeill**, N. The nymph of *Lestes sponsa* (Hansmann) (Odonata, Lestidae). Ent. mon. Mag., London **86** 1950 pp. 103–109, 6 figs.
- 1868.—**MacNeill**, N. The nymph of *Enallagma cyathigerum* (Charpentier) described with comparative references to *Ischnura elegans* (Lind.), *Coenagrion puella* (L.) and *C. pulchellum* (Lind.) (Odon., Coenagrionidae). Ent. mon. Mag., London **86** 1950 pp. 234–242, 9 figs.
- 1869.—**MacNeill**, N. Odonata—Irish distribution. Irish Nat. J., Belfast **10** 1950 pp. 17–20.
- MacSwain**, J. W. see Linsley & MacSwain.
- Madel**, W. see Blaszyk & Madel.
- 1870.—**Mader**, L. Coccinellidae II. Teil. Explor. Parc nat. Albert, Miss. de Witte (1933–1935). Brussels fasc. 34 1950 136 pp. 36 figs. [Col.]
- 1871.—**Mader**, L. Neue Coccinelliden aus Bolivien. Wien. ent. Rdsch., Vienna **2** 1950 pp. 38–40. [Col.]
- 1872.—**Magnus**, D. Beobachtungen zur Balz und Eiablage des Kaisermantels *Argynnis paphia* L. (Lep., Nymphalidae). Z. Tierpsychol., Berlin **7** 1950 pp. 435–449, 10 figs.
- 1873.—**Mahdihassan**, S. The Mysore lac insect. J. Bombay nat. Hist. Soc. **49** 1950 pp. 197–200, 5 figs. [Hem.]
- 1874.—**Makino**, S. & **Momma**, E. Observations on the structure of grasshopper chromosomes subjected to a new acetocarmine treatment. J. Morph., Philadelphia **86** 1950 pp. 229–245. [Orth.]
- 1875.—**Makoui**, G. Les Acrididae de Azerbaiedjan. Ent. Phytopath. appl., Teheran no. 10 1950 pp. 3–11. [Orth.]
- 1876.—**Maksymov**, J. Untersuchungen über den krummzähnigen Weisstannenborkenkäfer *Ips curvidens* Germ. während seiner Massenvermehrung 1947–49 in der Schweiz. Mitt. schweiz. Anst. forstl. Versuchsw., Zürich **26** 1950 pp. 499–581, 4 pls. 29 figs. [Col.]
- 1877.—**Malaise**, R. The genera *Waldheimia*, *Probleta* and other Neotropical Tenthredinoidea (Hym.). Ark. Zool., Stockholm **42A** 1950 no. 9, 61 pp. 2 pls. 16 figs.
- 1878.—**Malaise**, R. New entomological evidences of a former trans-Pacific land-connection. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 434–437.
- 1879.—**Malaise**, R. How to keep collected insects free from mould and pests in any climate. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 926–927.
- Maldonado Capriles** see Rehn, Maldonado Capriles & Henderson.
- 1880.—**Malkin**, B. Notes on certain Mexican Coccinellidae (Coleoptera). Pan-Pacif. Ent., San Francisco **26** 1950 pp. 156–158, 1 fig.
- 1881.—**Mallamaire**, A. Observations biométriques concernant le criquet pèlerin (*Schistocerca gregaria* Forsk.) en Afrique occidentale française. C.R. 1er Conf. int. Africanistes Ouest, Dakar & Paris **1** 1950 pp. 252–258. [Orth.]
- Malogolowkin**, C. see Burla, Brito da Cunha, Cordeiro, Dobzhansky, Malogolowkin & Pavan.
- Maltais**, J. B. see Auclair & Maltais.
- 1882.—[**Maluishev**, S. I.] The ways and conditions of the origin of Apidae (Hymenoptera, Apoidea). [In Russian.] C.R. Acad. Sci. URSS, Moscow (N.S.) **72** 1950 pp. 969–972.

1883.—**Mamet, R.** Notes on the Coccoidea of Madagascar. I. Mém. Inst. sci. Madagascar, Tananarive **4A** 1950 pp. 17–38, 8 figs. [Hem.]

1884.—**Mamet, R.** Redescription of a Mauritian Aphid of the genus *Amphorophora* Buckton (Homoptera). Proc. R. ent. Soc. London (B) **19** 1950 pp. 1–3, 1 fig.

1885.—**Mamet, R.** A new species of *Cerococcus* Comstock (Homoptera : Coccoidea) from Mauritius. Proc. R. ent. Soc. London (B) **19** 1950 pp. 35–38, 2 figs.

1886.—**Mann F., G.** Dos nuevas sub-especies del *Anopheles pseudo-punctipennis* Th. 1901. Biológica, Santiago de Chile fasc. VIII–XI (1948–1949) 1950 pp. 33–42, 14 figs. [Dipt.]

Manna, G. K. see Chaudhuri & Manna.

1887.—**Mannheims, B.** Neue *Tipula*-Arten aus Italien (Dipt. Tipulidae). Bonn. zool. Beitr. **1** 1950 pp. 70–78, 4 figs.

1888.—**Mannheims, B.** Ueber Sammeln, Vorkommen und Flugzeiten mitteleuropäischer Tipuliden (Dipt.). Bonn. zool. Beitr. **1** 1950 pp. 92–95.

1889.—**Manuel, H. D.** A mosquito survey of Lake Bloomington. Trans. Illinois Acad. Sci., Springfield **41** 1948 pp. 111–112. [Dipt.]

1890.—**Maqsud Nasir, M.** Biology of *Chrysopa scleistes* Banks. Indian J. Ent., New Delhi **9** (1947) 1950 pp. 177–192, 25 figs. [Neur.]

1891.—**Marchant, S.** Notes on a migration of the butterfly *Libythea labdaca*. Nigerian Field, London **15** 1950 pp. 88–90. [Lep.]

1892.—**Marcuzzi, G.** Descrizione di nuove specie di Tendipedidae (Diptera) del bacino del Mediterraneo. Ann. naturh. Mus. Wien **57** (1949–1950) 1950 pp. 273–280, 7 figs.

1893.—**Marcuzzi, G.** Contribución al conocimiento de los Tenebrionidae de Venezuela. Mem. Soc. Cienc. nat. La Salle, Caracas **9** 1949 pp. 333–352, 17 figs. [Col.]

1894.—**Marcuzzi, G.** Descrizione di cinque nuove specie di Tene-

brionidae del Venezuela (Col. Heteromera). Mem. Soc. ent. ital., Genova **29** 1950 pp. 105–109.

Maria see Apolinar María.

1895.—**Marion, H.** Contribution à l'étude des *Crambus* paléarctiques. II, III. Rev. franç. Lép., Paris **12** 1950 pp. 236–240, 1 pl., 261–277, 1 pl.

1896.—**Marlier, G.** La perméabilité à l'eau de la peau d'un insecte aquatique. Ann. Soc. zool. Belg., Brussels **79** (1948) 1949 pp. 63–72, 1 fig. [Trichopt., Megalopt.]

1897.—**Marlier, G.** Une famille de Trichoptères nouvelle pour l'Afrique : Les Stenopsychidae. Bull. Ann. Soc. ent. Belg., Brussels **86** 1950 pp. 207–218, 13 figs.

1898.—**Marlier, G.** Sur deux larves des *Simulium* commensales de nymphes d'Ephémères. Rev. Zool. Bot. afr., Brussels **43** 1950 pp. 135–144, 14 figs. [Dipt.]

1899.—**Marshall, Sir G. A. K.** New Curculionidae (Col.) from Tropical Africa. Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 725–743, 2 figs.

1900.—**Marshall, Sir G. A. K.** On the West African species of *Echinocnemus* Schönh. (Col., Curcul.). Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 765–774.

1901.—**Marshall, Sir G. A. K.** New Curculionidae (Col.) from Kilimanjaro. Ent. mon. Mag., London **86** 1950 pp. 75–77.

1902.—**Marshall, Sir G. A. K.** Contribution à l'étude de l'Air. Coléoptères Curculionidae. Mém. Inst. franc. afr. noire, Paris no. 10 1950 pp. 207–211.

1903.—**Marshall, Sir G. A. K.** New Curculionidae (Col.) from the Belgian Congo. Rev. Zool. Bot. afr., Brussels **43** 1950 pp. 260–266.

1904.—**Marten, W.** Las razas de *Erebia epistygne* Hbn. en España y Francia meridional. Trab. Mus. Cienc. nat. Barcelona (N.S. Zool.) **1** 1948 no. 2 pp. 15–19 [Lep.]

1905.—**Marten, W.** Neues über *Ocnogyna latreillei* Godt. (Lep., Arctiidae). Z. Lepid., Krefeld **1** 1950 pp. 53–55, 1 fig.

- 1906.—**Martin, jr., A.** The significance of the action of radioactive phosphorous on *Habrobracon juglandis* Ashmead. Proc. Penn. Acad. Sci., Harrisburg **24** 1950 pp. 60–64. [Hym.]
- 1907.—**Martin, jr., A. & Seale, J. K.** A morphological study of seven abnormalities in *Habrobracon juglandis* Ashmead. Proc. Penn. Acad. Sci., Harrisburg **24** 1950 pp. 48–59, 15 figs. [Hym.]
- 1908.—**Martin Sanz, L. & Rodriguez Azagra, E.** Anofelinos. I, II. Med. colon., Madrid 1950 **15** pp. 113–130, 10 figs.; **16** pp. 124–142, 13 figs. [Dipt.]
- 1909.—**Martínez, A.** Notas coleopterológicas IV. An. Soc. cient. argent., Buenos Aires **60** 1950 pp. 159–172, 5 figs.
- 1910.—**Martínez, A.** Lamellicornia neotrópica II. Arthropoda, Buenos Aires **1** 1950 pp. 167–173, 1 fig. [Col.]
- 1911.—**Martínez, A.** Contribución al conocimiento del género *Megathopa* Eschsch., 1822, en la Argentina. Eos, Madrid **26** 1950 pp. 197–269, 13 figs., 3 maps. [Col.]
- 1912.—**Martínez, A.** Algunos Culicidae nuevos o poco conocidos para las entomofaunas de Argentina, Bolivia y Paraguay. Publ. Mis. Estud. Pat. reg. Argent., Buenos Aires no. 78 1950 pp. 33–41, 4 figs. [Dipt.]
- 1913.—**Martínez Palacios, A.** Identificación de los mosquitos mexicanos del subgénero *Culex* (Diptera: Culicidae) por la genitalia masculina. Rev. Soc. mexicana Hist. nat. **11** 1950 pp. 183–187, 2 pls.
- Martínez Palacios, A.** see Vargas & Martínez Palacios.
- 1914.—[**Martuinov, A. V.**] Liassic insects from Shurab and Kisyl-Kiya. Trav. Inst. paléont. Acad. Sci. URSS, Moscow **7** 1937 pp. 1–232, 7 pls. 102 figs. [Fossil.]
- Martuinova, O. M.** see Bekker-Migdisova & Martuinova.
- 1915.—**Marucci, P. E. & Clancy, D. W.** The artificial culture of fruit flies and their parasites. Proc. Hawaii. ent. Soc., Honolulu **14** (1949) 1950 pp. 163–166. [Dipt.]
- Massera, M. G.** see Bianchi, Caporiacco, Massera & Valle.
- 1916.—**Matagne, G.** Comment saute une "sauterelle". Nat. belges, Brussels **31** 1950 pp. 90–94, 4 figs. [Orth.]
- 1917.—**Mateu, J.** Caráridos nuevos o interesantes de la fauna ibérica. Eos, Madrid **26** 1950 pp. 37–53, 16 figs. [Col.]
- Mather, K.** see Harrison & Mather.
- 1918.—**Matheson, R.** Medical Entomology. 2nd edn. Ithaca, New York, Comstock Publ. Co. Inc. 1950 vi & 612 pp. 4 pls. 242 figs.
- 1919.—**Mathews, W. H.** Notes on the ant-lions of the subfamily Myrmeleontinae. W. Aust. Nat., Perth **2** 1950 pp. 64–66, 4 figs. [Neur.]
- 1920.—**Mathur, R. N.** The puparia of some Indian Tachinidae (Diptera) III. Indian For. Rec., Delhi (N.S.) Ent. **8** (1949) 1950 pp. 1–6, 1 pl.
- 1921.—**Mathur, R. N.** Larvae of two species of Anthribidae. Indian For. Rec., Delhi (N.S.) Ent. **8** 1950 pp. 13–16, 1 pl. [Col.]
- 1922.—**Mathur, R. N.** The larva of *Dinoderus bifoveolatus* Woll. (Coleoptera : Bostrichidae). Indian J. Ent., New Delhi **10** (1948) 1950 pp. 1–4, 10 figs.
- 1923.—**Matthee, J. J.** The egg of the brown locust. Fmg. S. Afr., Pretoria **25** 1950 pp. 255–257. [Orth.]
- 1924.—**Matthey, R.** La formule chromosomiale de *Pycnoscelus surinamensis* L. Race bissexuée et race parthénogénétique. Existence probable d'une parthénogénèse diploïde facultative. Arch. Klaus-Stift. VererbForsch. Zürich **23** (1948) 1949 pp. 517–520, 11 figs. [Orth.]
- 1925.—**Matthey, R.** La formule chromosomique et la méiose chez *Apteromantis bolivari* Werner (Mantidae-Ameliniae). Arch. Klaus-Stift. VererbForsch. Zürich **24** 1949 pp. 114–123, 23 figs. [Orth.]

- 1926.**—**Matthey, R.** Les chromosomes de *Saga cappadocica* Werner (Orthoptera-Tettigoniidae). Arch. Klaus-Stift. VererbForsch. Zürich **25** 1950 pp. 44–46, 5 figs.
- Mattingly, P. F.** see Coe, Freeman & Mattingly ; Knight & Mattingly.
- 1927.**—**Maulik, S.** The larva and pupa of *Brontispa namorikia* Maulik (Coleoptera : Chrysomelidae : Hispinae). Proc. Hawaii. ent. Soc., Honolulu **14** (1949) 1950 pp. 167–171, 1 fig.
- 1928.**—**Mayer, H.** Zwei neue Fungivoridaen (Diptera Nematocera) aus der Sammlung des Naturhistorischen Museums Wien. Ann. naturh. Mus. Wien **57** (1949–1950) 1950 pp. 281–283, 2 figs.
- 1929.**—**Mayr, E.** The role of the antennae in the mating behaviour of female *Drosophila*. Evolution, Lancaster, Pa. **4** 1950 pp. 145–154, 1 fig. [Dipt.]
- 1930.**—[**Medvedev, S. I.**] Fn. USSR. Coleoptera **10** no. 3. Subfamily Rutelinae (Cereal beetles and related groups). [In Russian.] Inst. zool. Acad. Sci. URSS, Moscow (N.S.) **36** 1949 371 pp. 567 figs.
- 1931.**—**Meijere, J. C. H. de.** Achtste Supplement op de Nieuwe Naamlijst van Nederlandsche Diptera van 1898 (Tweede Supplement op mijne Naamlijst van 1939). Tijdschr. Ent., Amsterdam **92** (1949) 1950 pp. 1–14, 2 figs.
- 1932.**—**Meijere, J. C. H. de.** Die Larven der Agromyziden. Neunter Nachtrag. Tijdschr. Ent., Amsterdam **92** (1949) 1950 pp. 15–33, 61 figs. [Dipt.]
- 1933.**—**Melander, A. L.** *Aphoebanthus* and its relatives *Epacmus* and *Euccesia* (Diptera : Bombyliidae). Ann. ent. Soc. Amer., Columbus **43** 1950 pp. 1–45, 2 pls.
- 1934.**—**Melander, A. L.** Taxonomic notes on some smaller Bombyliidae (Diptera). Pan-Pacif. Ent., San Francisco **26** 1950 pp. 139–144, 145–156.
- 1935.**—**Meléndez, B.** Tratado de Paleontología. Tomo 2. Invertebrados—2º. Artrópodos y Moluscos. Madrid, Invest. ci. Inst. "Lucas Mallad" invest. geol. 1950 xvi + 710 pp. 17 pls. 420 figs. [Insecta pp. 171–187.]
- 1936.**—**Mell, R.** Artbildung durch physiologische Differenzierung (chemotaktische Antizipation) in der Gattung *Rhopalocampa* Wall. (Lepidopt. Hesperiidae). Bonn. zool. Beitr. **1** 1950 pp. 86–91, 1 col. pl., 1 fig.
- 1937.**—**Mendes, L. O. T.** Sobre a meiose de *Dysdercus mendesi* Bloete (1937) Hemiptera, Pyrrhocoridae. Braganzia, São Paulo **7** 1947 pp. 243–256, 5 pls.
- 1938.**—**Mendes, L. O. T.** Observações citológicas em *Dysdercus*. Cadeias de cromossômos em tecido somático de *Dysdercus mendesi* Bloete (Hemiptera-Pyrrhocoridae). Braganzia, São Paulo **9** 1949 pp. 53–57, 5 pls.
- 1939.**—**Menesse, N. H.** Butterflies of Sind. J. Bombay nat. hist. Soc. **49** 1950 pp. 20–24. [Lep.]
- 1940.**—**Menon, M. A. U.** The male of a new species of the subgenus *Aedes* Meigen, 1818 (Diptera : Culicidae). Proc. R. ent. Soc. London (B) **19** 1950 pp. 139–141, 1 fig.
- 1941.**—**Menon, M. G. Ramdas.** A review of our knowledge of the genus *Cryptochaetum* Rondani, an interesting group of Dipterous scale-parasites. Indian J. Ent., New Delhi **11** (1949) 1950 pp. 1–8.
- 1942.**—**Menozzi, C.** Formiche dell'isola. Fernando Poo e del territorio del Rio Muni (Guinea Spagnola). Zool. Anz., Leipzig **140** 1942 pp. 164–182, 4 figs. [Hym.]
- 1943.**—**Méquignon, A.** Les *Thanasymus* de France et leurs variétés (Clerides). Entomologiste, Paris **6** 1950 pp. 69–70. [Col.]
- 1944.**—**Mercado, T. I.** Observations on the respiration of Triatomines. Puerto Rico J. publ. Hlth. trop. Med., Burlington, Vt. **25** (1949–1950) 1950 pp. 428–443, 2 figs. [Hem.]
- Merkley, D. R.** see Ross & Merkley.
- 1945.**—**Merrell, D. J.** Measurement of sexual isolation and selective mating. Evolution, Lancaster, Pa. **4** 1950 pp. 326–331.

- 1946.—**Mesnil, L. P.** Critiques et suggestions à propos de récents travaux concernant les Protachinides d'Afrique. Bull. Ann. Soc. ent. Belg., Brussels **86** 1950 pp. 104–117. [Dipt.]
- 1947.—**Mesnil, L. P.** Première note préliminaire sur les Tachinidae du Parc Albert. Bull. Inst. Sci. nat. Belg., Brussels **26** 1950 no. 3, 6 pp. [Dipt.]
- 1948.—**Mesnil, L. P.** Réhabilitation de deux espèces de Tachinaires décrites par Robineau-Desvoidy. Bull. Soc. ent. Fr., Paris **54** (1949) 1950 pp. 153–154. [Dipt.]
- 1949.—**Mesnil, L. P.** Tachinidae, Larvaevoridae ou Echinomyidae. Bull. Soc. ent. France, Paris **55** 1950 pp. 30–32. [Dipt.]
- 1950.—**Mesnil, L. P.** Notes sur les Carceliina (Dipt. Tachinidae) et révision des espèces d'Afrique. Rev. Zool. Bot. afr., Brussels **43** 1950 pp. 1–24.
- 1951.—**Metcalf, Z. P.** Zoogeography of the Homoptera. C.R. 13e Congr. int. Zool. Paris 1948, 1949 pp. 538–544.
- 1952.—**Metcalf, Z. P.** Homoptera from the Caroline Islands. Occ. Pap. Bishop Mus., Honolulu **20** 1950 pp. 59–76, 10 figs.
- 1953.—**Metcalf, Z. P.** Methods in systematic entomology. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 152–155.
- 1954.—**Metcalf, Z. P.** Phylogeny of the Homoptera Auchenorrhyncha. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 561–565.
- 1955.—**Metzky, I.** Morphologie und Physiologie des Branchialorgans der Helminenlarven. Oesterr. Zool. Z., Vienna **2** 1950 pp. 585–604, 11 figs. [Col.]
- 1956.—**Meyer, J. H.** Ein neuer sec. *Celerio* Hybrid. Wien. ent. Rdsch., Vienna **2** 1950 pp. 13–18. [Lep.]
- 1957.—**Michalk, O.** Ueber die Färbungswandlungen, Generations- und Fortpflanzungsverhältnisse der mitteleuropäischen *Eurydema*-Arten (II. Beitrag). Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 240–254, 5 figs. 1 chart. [Hem.]
- 1958.—**Micheli, L.** Sull'*Osmia tridentata* Duf. e Perris. Il nido, il bozzolo, la larva (Hymenoptera-Apidae). Boll. Soc. ent. ital., Genoa **80** 1950 pp. 39–43, 6 figs.
- 1959.—**Michener, C. D.** A northern subspecies of *Eacles imperialis* (Lepidoptera, Saturniidae). J. Kansas ent. Soc., Manhattan **23** 1950 pp. 17–21, 5 figs.
- 1960.—**Michener, C. D.** New genera and subgenera of Saturniidae (Lepidoptera): a correction. J. Kansas ent. Soc., Manhattan **23** 1950 p. 26.
- 1961.—**Mickel, C. F.** see Nicholson & Mickel.
- 1962.—**Middlekauff, W. W. & Quate, L. W.** New distribution records from some Nearctic Tabanidae (Diptera). Pan-Pacif. Ent., San Francisco **26** 1950 pp. 95–96.
- 1963.—**Milani, R.** Ulteriori osservazioni sul ceppo so di *Drosophila melanogaster*. Scientia Genet., Turin **3** 1950 pp. 247–259, 2 figs. [Dipt.]
- 1964.—**Miles, W. R.** see Beck & Miles.
- 1965.—**Miller, A.** see Demerec, N.
- 1966.—**Miller, D.** Catalogue of the Diptera of the New Zealand sub-region. Bull. Dep. sci. industr. Res. N.Z. [Wellington] no. 100 (Ent. Res. Sta. Publ. no. 5) 1950 194 pp. 2 portr. 1 map.
- 1967.—**Miller, D. D.** Mating behaviour in *Drosophila affinis* and *D. algonquin*. Evolution, Lancaster, Pa. **4** 1950 pp. 123–134, 1 fig. [Dipt.]
- 1968.—**Miller, D. W.** Observations on two cases of interspecific hybridization with *Drosophila athabasca*. Amer. Nat., Lancaster, Pa. **84** 1950 pp. 81–93, 1 fig. [Dipt.]
- 1969.—**Miller, N. C. E.** New Reduviidae in the collection of the British Museum (Natural History).—I–IV. Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 253–261, 6 figs., 382–396, 10 figs., 485–505, 14 figs., 786–804, 14 figs. [Hem.]
- 1970.—**Michelbacher, A. E.** see Smith & Michelbacher.

- 1967.**—Miller, N. C. E. New genera and species of Reduviidae (Rhynchota) from Southern Rhodesia. Proc. zool. Soc. London **120** 1950 pp. 189–264, 72 figs. [Hem.]
- 1968.**—Milliron, H. E. Descriptions of some species of the genus *Pulvilligera* Strand from the South and Southwest Pacific (Hymenoptera: Chalcidoidea; Torymidae). Pacific Sci., Honolulu **4** 1950 pp. 346–354, 7 figs.
- 1969.**—Milliron, H. E. The identity of a Cleptid egg parasite of the common walking stick, *Diapheromera femorata* Say (Hymenoptera: Cleptidae). Proc. ent. Soc. Washington **52** 1950 p. 47.
- 1970.**—Mills, M. B. Observations on processionary caterpillars. W. Aust. Nat., Perth **2** 1950 pp. 84–87. [Lep.]
- 1971.**—Millspaugh, D. D. Entomological notes taken while in the Orient. Proc. Iowa Acad. Sci., Des Moines **55** 1948 pp. 429–432.
- 1972.**—Millspaugh, D. D. Revisions and additions to our list of Iowa Corixidae. Proc. Iowa Acad. Sci., Des Moines **56** 1949 pp. 371–375, 1 fig. [Hem.]
- 1973.**—Milum, V. G. Grooming dance and associated activities of the honeybee colony. Trans. Illinois Acad. Sci., Springfield **40** 1949 pp. 194–196. [Hym.]
- 1974.**—Miré, P. de. Un nouveau *Duvalius* de l'Ardèche. Publ. Mus. Hist. nat., Paris no. 10 1948 pp. 69–71, 3 figs. [Col.]
- 1975.**—Mirzayan, H. Quelques Cerambycides de l'Iran. Ent. Phytopath. appl., Teheran no. 10 1950 pp. 12–19. [Col.]
- 1976.**—[Mishchenko, L. L.] New data on the Central Asiatic fauna of noxious Acrididae (Saltatoria-Orthoptera, Acridoidea). [In Russian.] C.R. Acad. Sci. URSS, Moscow (N.S.) **71** 1950 pp. 789–792, 8 figs.
- 1977.**—[Mishchenko, L. L.] New species of Acrididae (Saltatoria-Orthoptera, Acridoidea) from Central Asia and Kashmir. [In Russian.] C.R. Acad. Sci. URSS, Moscow (N.S.) **72** 1950 pp. 213–215, 16 figs.
- Misra** see Surendra Deo Misra.
- 1978.**—Mitchell, R. T. The genus *Acroricinus* in America (Hymenoptera, Ichneumonidae). Ann. ent. Soc. Amer., Columbus **43** 1950 pp. 249–261, 3 figs. 1 map.
- Mitra**, P. K. see Mukerji & Mitra.
- 1979.**—Mittelstaedt, H. Physiologie des Gleichgewichtssinnes bei fliegenden Libellen. Z. vergl. Physiol., Berlin **32** 1950 pp. 422–463, 21 figs. [Odon.]
- Mittelstaedt**, H. see Holst & Mittelstaedt.
- 1980.**—Mittler, S. Genetic variation in populations of *Drosophila melanogaster*: in the Chicago area. Trans. Illinois Acad. Sci., Springfield **42** 1949 pp. 156–158. [Dipt.]
- 1981.**—Miya, K. Studies on the development of [the] gonad of the silkworm, *Bombyx mori* L. I. On the region and period of differentiation of germ cells. Trans. Sapporo nat. Hist. Soc. **19** 1950 pp. 36–39, 2 figs. [Lep.]
- 1982.**—Miyatake, M. A contribution to the Siricoidea of Shikoku (Hymenoptera). Trans. Shikoku ent. Soc. **1** 1950 pp. 38–39.
- 1983.**—Miyatake, M. & Yano, S. Ecological notes on *Arma custos* Fabricius (Hemiptera: Pentatomidae). Trans. Shikoku ent. Soc. **1** 1950 pp. 40–44, 1 pl.
- 1984.**—Móczár, L. Einige bemerkenswerte Hymenopteren aus meinen Aufsammlungen im Jahre 1943. [In Magyar with German summary.] Folia ent. hung., Budapest **8** 1943 pp. 57–60.
- 1985.**—Móczár, L. Hymenopterologische Notizen IV. [In Magyar with German summary.] Folia ent. hung., Budapest **8** 1943 pp. 84–86.
- 1986.**—Móczár, L. Les Cleptides du bassin des Karpathes (Fam. Cleptidae, Hym.). Folia ent. hung., Budapest (N.S.) **3** 1949 pp. 40–45, 1 map.
- 1987.**—Móczár, L. Notes on the Pompilid species in the Carpathian Basin (Hym.). Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 438–446, 4 maps.

- 1988.—**Móczár**, L. Zur Ethologie der Wegwespen *Psammochares plumbeus* F., *Ps. (Anoplitus) infuscatus* Lind. und *Episyron rufipes* L. (Hym. Psammocharidae). Zool. Anz., Leipzig **143** 1943 pp. 141–152, 10 figs.
- 1989.—**Móczár**, M. Beitrag zur Kenntnis der Gerafflügler der Umgebung von Jászberény. [In Magyar with German summary.] Folia ent. hung., Budapest **7** 1942 pp. 99–101. [Orth., Dermapt.]
- Moczarski**, S. Z. see Wheatley & Moczarski.
- 1990.—**Moericke**, V. Ueber das Farbsehen der Pfirsichblattlaus (*Myzodes persicae* Sulz.). Z. Tierpsychol., Berlin **7** 1950 pp. 265–274, 5 figs. [Hem.]
- 1991.—**Moller-Racke**, I. Farbensinn und Farbenblindheit bei Insekten. Verh. dtsch. Zool. Mainz 1949, Leipzig 1950 pp. 205–208.
- Momma**, E. see Makino & Momma.
- 1992.—**Monastero**, S. Morfología della formica argentina (*Iridomyrmex humilis* Mayr). Giorn. Sci. nat. econ. Palermo **46** 1949 Sez. II no. 3, 8 pp. 1 pl. [Hym.]
- 1993.—[**Monchadskii**, A. S.] Contribution to the knowledge of the larvae of mosquitoes (Diptera, Culicidae). II. New and little-known larvae of mosquitoes of the Far East. [In Russian.] Parasit. Sborn. Moscow **9** 1948 pp. 167–182.
- 1994.—**Monrós**, F. Descripciones y comentarios sobre Chlamisinae neotropicales (Coleoptera, Chrysomelidae). Rev. brasil. Biol., Rio de Janeiro **10** 1950 pp. 409–424, 24 figs.
- 1995.—**Monrós**, F. & **Viana**, M. J. Revisión de las especies argentinas de Dorynotini (Col. Cassidinae). Acta zool. lilloana, Tucuman **8** 1949 pp. 391–426, 14 figs.
- 1996.—**Monte**, T. de. Una nuova razza del *Chrysochus asclepiadeus* Pallas (Coleopt. Chrysomelidae). Atti Mus. Stor. nat. Trieste **17** 1948 pp. 57–60, 2 figs.
- 1997.—**Monte**, T. de. Su alcune specie critiche di *Bembidion*, appartenenti al subgen. *Testediolum* Ganglb. (Col. Carabidae). Atti Mus. Stor. nat. Trieste **17** 1949 pp. 99–103, 1 fig.
- 1998.—**Monte**, T. de. Una nuova specie di *Bembidion* dell'isola di Cipro (Col. Carabidae). Atti Mus. Stor. nat. Trieste **17** 1949 pp. 104–107.
- 1999.—**Montero**, M. La *Saturnia pyri* Schiff., y las ondas electromagnéticas. Graellsia, Madrid **7** 1949 pp. 57–60. [Lep.]
- 2000.—**Moore**, G. A. Catalogue des hémiptères de la province de Québec. Nat. canad., Quebec **77** 1950 pp. 233–271.
- 2001.—**Moore**, jr., L. E. Distribution of mayfly nymphs (Ephemeroptera) in streams of Dallas County, Texas. Field & Lab., Dallas **18** 1950 pp. 103–112, 9 figs.
- 2002.—**Moracci**, E. Recenti ricerche sulla funzione dei corpi faringei degli insetti. Hist. Nat., Rome **2** 1950 pp. 31–32.
- 2003.—**Morales Agacino**, E. Algunos datos sobre acrídidos de El Libano. Eos, Madrid **26** 1950 pp. 19–36, 10 figs. [Orth.]
- 2004.—**Morales Agacino**, E. Apuntes sobre los Phasmidae y Tettigoniidae marroquíes del Instituto Español de Entomología. Eos, Madrid **26** 1950 pp. 157–196, 17 figs. [Orthopt.]
- 2005.—**Moree**, R. Apparatus for the study of population models of *Drosophila* and other insects. Ann. ent. Soc. Amer., Columbus **43** 1950 pp. 72–74, 2 figs.
- Moreno**, V. see del Cañizo & Moreno.
- 2006.—**Moreton**, B. D. Guide to British insects. An aid to identification. London, Macmillan & Co. Ltd. 1950 vii & 188 pp. 96 figs.
- Morishita**, F. see Clark & Morishita.
- 2007.—**Morley**, D. W. The investigation of the learning ability of ants. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 329–333, 4 figs. [Hym.]
- 2008.—**Morley**, D. W. The division of labour in the ants. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 523–529, 4 figs. [Hym.]

2009.—**Morley**, D. W. Artificially induced egg-laying in virgin ants. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 589–592, 1 fig. [Hym.]

Morrison, F. O. *see* Fisher & Morrison.

2010.—**Morrissey**, T. Tanypodinae of Iowa (Diptera). III. Amer. Midl. Nat., Notre Dame **43** 1950 pp. 88–91, 4 figs.

2011.—**Moscardini**, C. Un nuovo *Duvalius* dell'Appenino Emiliano (Coleoptera : Carabidae). Boll. Soc. ent. ital., Genoa **80** 1950 pp. 19–21, 2 figs.

2012.—**Moscona**, A. Blastokinesis and embryonic development in a Phasmid. Experientia, Basle **6** 1950 pp. 425–426, 5 figs. [Orth.]

2013.—**Moscona**, A. Studies of the egg of *Bacillus libanicus* (Orthoptera, Phasmidae). I, II. Quart. J. micr. Sci., London **91** 1950 pp. 183–193, 6 figs., 195–203.

2014.—**Mosely**, M. E. The Indian caddis flies (Trichoptera). Part XI. J. Bombay nat. Hist. Soc. **48** (1949) 1950 pp. 782–791, 13 pls.

2015.—**Mouchet**, J. Contribution à l'étude de l'Air. Coléoptères Elateridae. Mém. Inst. franç. Afr. noire, Paris no. 10 1950 pp. 183–190, 6 figs.

2016.—**Moure**, J. S. Notas sobre alguns Meliponinae bolivianos (Hymenoptera, Apoidea). Dusenia, Curitiba **1** 1950 pp. 70–80.

2017.—**Moure**, J. S. & **Kerr**, W. E. Sugestões para a modificação da sistemática do gênero *Melipona* (Hymen.-Apoidea). Dusenia, Curitiba **1** 1950 pp. 105–129, 2 pls. 5 maps.

2018.—**Mroczkowski**, M. A new species of *Anthrenus* Geoffr. from Poland (Coleoptera, Dermestidae). Ann. Mus. zool. polon., Warsaw **14** 1950 pp. 187–192, 1 pl.

2019.—**Mroczkowski**, M. Notes on successive appearance of some species of the genus *Nicrophorus* Fabr. and *Neonicrophorus* Hatch (Col. Silphidae). [In Polish with English summary.] Polsk. Pismo ent., Wrocław **19** (1949) 1950 pp. 196–199, 2 graphs.

2020.—**Muesebeck**, C. F. W. Two new species of *Opius* from rose hips (Hymenoptera : Braconidae). Canad. Ent., Guelph **81** (1949) 1950 pp. 254–256, 4 figs.

2021.—**Muesebeck**, C. F. W. Common names of insects approved by the American Association of Economic Entomologists. J. econ. Ent., Menasha **43** 1950 pp. 117–138.

2022.—**Muesebeck**, C. F. W. Two new genera and three new species of Braconidae (Hymenoptera). Proc. ent. Soc. Washington **52** 1950 pp. 77–81, 1 pl.

2023.—**Muizon**, J. de. Contribution à l'étude de l'Air. Coléoptères Brentidae. Mém. Inst. franç. Afr. noire, Paris no. 10 1950 p. 212.

2024.—**Mukerji**, D. & **Mitra**, P. K. Studies on the biology of the termite *Odontotermes redemannii* (Wasmann). C.R. 13e Congr. int. Zool. Paris 1948, 1949 pp. 186–189. [Isopt.]

2025.—**Mukerji**, D. & **Mitra**, P. K. Ecology of the mound-building termite *Odontotermes redemannii* (Wasmann) in relation to measures of control. Proc. zool. Soc. Bengal, Calcutta **2** 1949 pp. 9–27, 1 pl. 3 figs. [Isopt.]

2026.—**Mukerji**, S. On a new species of phytophagous Chalcidoidea *Megastigmus albizziae* sp. n., feeding on *Albizia odoratissima* pods in the environs of Delhi. Proc. R. ent. Soc. London (B) **19** 1950 pp. 129–132, 11 figs. [Hym.]

2027.—**Mukerji**, S. & **Chatterjee**, S. N. *Diaeretus aphidum* sp. n. (Hemiptera [sic=Hymenoptera] Aphidiidae) a parasite of *Pterochlorus persicae* Cholodkovsky on *Prunus persica* in Baluchistan. Proc. R. ent. Soc. London (B) **19** 1950 pp. 4–6, 8 figs.

Müller, B. *see* Eichler & Müller.

2028.—**Müller**, F. P. Ueber Schadaufreten und Biologie von *Colaphellus sophiae* Schall. (Chrysomel.). Z. angew. Ent., Berlin **31** 1950 pp. 591–608, 2 figs. [Col.]

2029.—**Müller**, G. Contributo alla conoscenza dei Coleotteri fitofagi (Cerambycidae e Chrysomelidae). Atti Mus. Stor. nat. Trieste **17** 1948 pp. 61–98, 4 figs.

2030.—Müller, G. Nuovi Coleotteri dell'Africa Orientale. Serie quinta. Atti Mus. Stor. nat. Trieste **17** 1949 pp. 152–161.

2031.—Müller, G. Nono contributo alla conoscenza del genere *Staphylinus* (Coleoptera : Staphylinidae). Boll. Soc. ent. ital., Genoa **80** 1950 pp. 8–11.

2032.—Müller, G. Appunti sulle *Asida* di Pelagosa, Pomo ed altri scogli dell'Adriatico meridionale (Coleoptera : Tenebrionidae). Boll. Soc. ent. ital., Genoa **80** 1950 pp. 12–13.

2033.—Müller, G. Osservazioni su alcuni Coleotteri Malacodermi. Boll. Soc. ent. ital., Genoa **80** 1950 pp. 13–14.

2034.—Mullin Diaz, E. A propósito de algunas especies de Culicini (Diptera, Culicidae) nuevas para el Uruguay. An. Inst. Hig. Montevideo **1** 1947 pp. 135–155, 1 map.

2035.—Mulnard, J. Origine et signification des principaux constituants de l'oocyte chez *Acanthoscelides obtectus* Say (Bruchidae-Coleoptère). Bull. Acad. Belg. Cl. Sci., Brussels (5) **36** 1950 pp. 767–778, 2 pls.

2036.—Munro, H. K. Trypetid flies (Diptera) associated with the Calendulaceae, plants of the family Compositae in South Africa. I. A biotaxonomic study of the genus *Mesoclanis*. J. ent. Soc. sthn Africa, Pretoria **13** 1950 pp. 37–52, 32 figs.

2037.—Munroe, E. The generic positions of some North American species commonly referred to *Pyrasta* Schrank (Lepidoptera : Pyralidae). Canad. Ent., Guelph **82** 1950 pp. 217–231, 28 figs.

2038.—Munroe, E. G. Subventral tubercles of Saturniid larvae—a supplementary note. Ent. News, Lancaster, Pa. **61** 1950 pp. 39–41. [Lep.]

2039.—Munroe, E. G. The *dina* group of the genus *Eurema* in the West Indies (Lepidoptera, Pieridae). J. New York ent. Soc. **58** 1950 pp. 172–191.

2040.—Munroe, E. G. The systematics of *Calisto* (Lepidoptera, Satyrinae), with remarks on the evolutionary and zoogeographic significance of the genus. J. New York ent. Soc., Lancaster, Pa. **58** 1950 pp. 211–240.

Munshi, D. M. see Karandikar & Munshi.

Munson, S. C. see Yeager & Munson.

2041.—Murayama, J. Nouvelles espèces de Scolytides (Coléoptères) de l'île de Shikoku. Insecta matsum., Sapporo **17** 1950 pp. 61–64.

2042.—Murayama, J. A new genus and some new species of Scolytidae from Japan (Coleoptera). Trans. Shikoku ent. Soc. **1** 1950 pp. 49–53.

2043.—Musgrave, A. J. A note on the dusting of crops with fluorescein to mark visiting bees. Canad. Ent., Guelph **82** 1950 pp. 195–196. [Hym.]

2044.—Muspratt, J. Notes on *Aedes* (Diptera, Culicidae) from Natal, with a description of a new species of the subgenus *Stegomyia*. J. ent. Soc. sthn Africa, Pretoria **13** 1950 pp. 73–79, 10 figs.

2045.—Muspratt, V. Etude sur la migration de *Celerio livornica lineata* Esper. Rev. franç. Lépidopt., Paris **12** (1949) 1950 pp. 180–190, 194–202.

2046.—Nabours, R. K. & Stebbins, F. M. Cytogenetics of the grouse locust *Apotettix eurycephalus* Hancock. Tech. Bull. Kansas agric. Exp. Sta., Manhattan no. 67 1950 116 pp. 1 pl. [Orth.]

Nagasawa, S. see Ohsawa & Nagasawa.

2047.—Nagy, B. Beiträge zur Kenntnis der Orthopteren-Fauna des jenseits der Tisza (Ung. Tiefebene). [In Magyar with German summary.] Folia ent. hung., Budapest **8** 1943 pp. 33–44.

2048.—Nájera, L. E. New technique for the breeding and maintenance of *Phlebotomus* colonies. Docum. neerl. indon. morb. trop., Amsterdam **2** 1950 pp. 312–317, 5 figs. [Dipt.]

2049.—Nájera, L. Sobre la alimentación de las larvas de *Phlebotomus*. Graellsia, Madrid 7 1949 pp. 61–69. [Dipt.]

2050.—Nakane, T. New or little known Coleoptera from Japan and its adjacent region II.—Erotylidae. Ent. Rev. Japan, Osaka 5 1950 pp. 6–13, 3 figs.

2051.—Nakane, T. New or little known Coleoptera from Japan and its adjacent regions. IV. Drilidae. Mushi, Fukuoka 21 1950 pp. 29–31.

2052.—Nakane, T. New or little known Coleoptera from Japan and its adjacent regions V. Mordellidae—Mordellinae II. Trans. Kansai ent. Soc., Nishinomiya 15 1950 pp. 20–24, 1 fig.

2053.—Nakane, T. & Nomura, S. New or little known Coleoptera from Japan and its adjacent regions. I. Mordellidae—Mordellinae. Trans. Kansai ent. Soc., Nishinomiya 15 1950 pp. 1–17, 9 figs.

Nakanishi, K. see Hirata, Nakanishi & Kikkawa.

2054.—Narbel, M. La maturation chez *Solenobia* spec. (*lichenella* L. ?) parthénogénétique (Lépid. Psychides) Communication préliminaire. Arch. Klaus-Stift. VererbForsch. Zürich 23 (1948) 1949 pp. 574–576, 6 figs.

2055.—Narbel-Hofstetter, M. La cytologie de la parthénogénèse chez *Solenobia* sp. (*lichenella* L. ?) (Lépidoptères, Psychides). Chromosoma, Berlin 4 1950 pp. 56–90, 37 figs.

2056.—Nash, T. A. M. & Davey, J. T. The resting habits of *Glossina medicorum*, *G. fusca* and *G. longipalpis*. Bull. ent. Res., London 41 1950 pp. 153–157, 2 pls. [Dipt.]

Nasir see Maqsud Nasir.

2057.—Nast, J. New genera and species of Neotropical Fulgoridae in the collection of the British Museum (Homoptera). Ann. Mus. zool. polon., Warsaw 14 1950 pp. 167–175, 19 figs.

2058.—Nast, J. Notes on the genus *Bennaria* Mel. with descriptions of new species (Homoptera, Cixiidae). Ann. Mus. zool. polon., Warsaw 14 1950 pp. 177–186, 11 figs.

2059.—Nast, J. A revision of the genus *Sphenorhina* Am. et Serv. (Homoptera, Cercopidae). Polsk. Pismo ent., Wrocław 19 (1949) 1950 pp. 114–148, 30 figs.

2060.—Neave, S. A. (Ed.) Nomenclator zoologicus. 5 (1936–1945). 1950 [3 &] 308 pp. London, Zoological Soc. Lond.

2061.—Needham, J. G. Observations on Chinese Gomphine dragonflies. Peking nat. Hist. Bull. 16 (1941) 1948 pp. 143–156, 6 figs. [Odon.]

2062.—Needham, J. G. Three new species of North American dragonflies with notes on related species. Trans. Amer. ent. Soc., Philadelphia 76 1950 pp. 1–12, 1 pl. [Odon.]

Nelson, G. E. see McLane & Nelson.

Neves see Baeta Neves.

Nežhić, E. see Simić, Nežhić & Tartal'a.

2063.—Nicholson, A. J. Competition for food amongst *Lucilia cuprina* larvae. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 277–281. [Dipt.]

2064.—Nicholson, H. P. & Mickel, C. E. The black flies of Minnesota (Simuliidae). Tech. Bull. Minnesota agric. Exp. Sta., St. Paul no. 192 1950 64 pp. 32 figs.

2065.—Nicholson, H. P. & Vetter, M. H. A lethal trap for capturing small mammals with their ectoparasites. J. Parasit., Lancaster, Pa. 36 1950 pp. 235–237, 1 fig.

2066.—Nielsen, A. Notes on the genus *Apatidea* MacLachlan. With descriptions of two new and possibly endemic species from the springs of Himmerland. Ent. Medd., Copenhagen 25 1950 pp. 384–404, 7 figs. [Trichopt.]

2067.—Nielsen, A. Noctuidefangst på "honingdogg." Norsk. ent. Tidsskr., Oslo 8 1950 pp. 126–128. [Lep.]

2068.—Nielsen, E. T. Swarming habits of mosquitoes. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 447–449. [Dipt.]

2069.—Nielsen, E. T. & A. T. Contributions towards the knowledge of the migration of butterflies. Amer. Mus. Novit., New York no. 1471 1950 29 pp. 10 figs. [Lep.]

2070.—Nielsen, E. T. & Greve, H. Studies on the swarming habits of mosquitos and other Nematocera. Bull. ent. Res., London 41 1950 pp. 227-258, 3 pls. 15 figs. [Dipt.]

2071.—Nielsen, P. Description of *Pedicia (Crunobia) zangeriana* a new species of crane-flies from Italy (Diptera : Tipulidae). Boll. Soc. ent. ital., Genoa 80 1950 p. 48, 1 fig.

2072.—Niemierko, S. & W. Metaphosphate in the excreta of the wax moth, *Galleria mellonella*. Nature, London 166 1950 pp. 268-269. [Lep.]

2073.—Niesiołowski, W. Contribution à la connaissance des Aculéates (Hym.) de la Pologne méridionale. [In Polish with French summary.] Polsk. Pismo ent., Wrocław 19 (1949) 1950 pp. 221-228.

2074.—Niesiołowski, W. & Wojtusiak, R. M. Contribution to the knowledge of the Lepidopterous fauna of Lubasz near Szczucin (South Poland). [In Polish with English summary.] Polsk. Pismo ent., Wrocław 19 (1949) 1950 pp. 256-276, 1 fig.

Nigam, L. N. see Khanna, Nigam, Sehgal & Bandyspadhyay.

2075.—Nijveldt, M. *Olinodiplosis biorrhizae* Kfr. (Diptera, Itonididae), f. n. sp. Ent. Ber., Amsterdam 13 1950 pp. 99-104, 9 figs.

2076.—[Nikol'skaya, M. N.] On the representatives of the family Signiphoridae (Hymenoptera, Chalcidoidea) in the fauna of the USSR. [In Russian.] C.R. Acad. Sci. URSS, Moscow (N.S.) 75 1950 pp. 319-321.

2077.—Nixon, G. E. J. New Indian Braconidae bred from Lepidopterous defoliators (Hymenoptera). Ann. Mag. nat. Hist., London (12) 3 1950 pp. 453-474, 19 figs.

2078.—Noé, J. & Silva, C. R. Una nueva variedad de *Triatoma infestans* (Klug, 1834). Biológica, Santiago de Chile fasc. VIII-XI (1948-1949) 1950 pp. 5-10. [Hem.]

2079.—Nogueira-Neto, P. Notas bionômicas sobre Meliponíneos (Hymenoptera, Apoidea). IV. Colônias mistas e questões relacionadas. Rev. Ent., Rio de Janeiro 21 1950 pp. 305-367.

2080.—Noirot, C. Le développement des neutres chez les termites supérieurs (Termitidae) III. Macrotermitinae. C.R. Acad. Sci., Paris 230 1950 pp. 475-477. [Isopt.]

Noirot, C. see Grassé & Noirot ; Grassé, Noirot, Clément & Buchli.

2081.—Nolte, D. J. The eye-pigmentary system of *Drosophila*: the pigment cells. J. Genet., London 50 1950 pp. 79-99, 1 pl. 12 figs. [Dipt.]

Nomura, S. see Nakane & Nomura.

2082.—Normand, H. Nouveaux Coléoptères du Nord de l'Afrique. Rev. franç. Ençt., Paris 17 1950 pp. 105-108, 2 figs.

2083.—Norris, M. J. (Mrs. O. W. Richards). Reproduction in the African migratory locust (*Locusta migratoria migratorioides* R. & F.) in relation to density and phase. Anti-Locust Bull., London no. 6 1950 50 pp., 7 figs. [Orth.]

2084.—Noskiewicz, J. & Chudoba, S. Les espèces siléniennes du genre *Oxybelus* Latr. [In Polish with French summary.] Polsk. Pismo ent., Wrocław 19 (1949) 1950 pp. 299-323, 4 pls. 3 figs. [Hym.]

2085.—Novitski, E. The transfer of mutant genes from small inversion. Genetics, Menasha 35 1950 pp. 249-252. [Dipt.]

2086.—Nowak, W. Zur Morphologie und Biologie der Grünen Pfirsichblattlaus (*Myzodes persicae* Sulzer). Z. Pflanzenbau u. Pflanzenschutz, Munich 1 1950 pp. 64-85, 3 figs. [Hem.]

2087.—Nüesch, H. Entwicklungsgeschichtliche Untersuchungen über die Flügelreduktion bei *Fumea casta* und *Solenobia triquetrella* (Lep.) und Deutung der *Solenobia*-Intersexen. Arch. Klaus-Stift. VererbForsch. Zürich 22 (1947) 1948 pp. 221-293, 28 figs.

- 2088.**—Nüesch, H. Zur Entstehung des Sexualdimorphismus bei Psychiden. Arch. Klaus-Stift. Vererb.-Forsch. Zürich **23** (1948) 1949 pp. 577-581, 1 fig. [Lep.]
- 2089.**—Nüesch, H. Ueber die Beziehungen zwischen Nerven und Tracheen im Schmetterlingsflügel. Rev. suisse Zool., Geneva **57** 1950 pp. 511-517, 2 figs. [Lep.]
- 2090.**—Nüesch, H. Geschlechtsbestimmung und Intersexualität im Tierreich. Verh. naturf. Ges. Basel **61** 1950 pp. 93-113, 2 figs.
- 2091.**—Nunberg, M. The stridulatory organ of *Ips sexdentatus* Boern. (Col. Scolytidae). Ann. Mus. zool. polon., Warsaw **14** 1950 pp. 135-140, 1 pl.
- Nutting, W. L. *see* Brown & Nutting; Edwards & Nutting.
- 2092.**—Nyblom, O. *Plectrocnemiella carelica*, a new species of Trichoptera. Notul. ent., Helsinki **30** 1950 pp. 39-40, 1 fig.
- 2093.**—Nyholm, T. Studien über die Familie Helodidae. IV, V. Ark. Zool., Stockholm **42A** 1950 no. 24, 5 pp. 3 pls.; (2) **1** 1950 pp. 199-202, 2 pls. [Col.]
- 2094.**—Nyholm, T. Zur Kenntnis der Circulionidenfauna Schwedens. 2. *Apion interjectum* Desbr., eine von *aestivum* Germ. gut getrennte Art, in Schweden aufgefunden. Ent. Tidskr., Stockholm **71** 1950 pp. 179-193, 5 figs. [Col.]
- 2095.**—Nyholm, T. Till kännedomen om den svenska copeognatfaunan. I. Två för vår fauna nya arter av släktet *Peripsocus* Hagen. Ent. Tidskr., Stockholm **71** 1950 pp. 194-198, 2 figs. [Psocopt.]
- 2096.**—Nyholm, T. Zur Systematik der Nordeuropäischen Donaciiden. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 156-164, 2 figs. [Col.]
- 2097.**—Obenberger, J. Contribution à l'étude de l'Air. Coléoptères Buprestidae. Mém. Inst. franç. Afr. noire, Paris no. 10 1950 pp. 191-198.
- 2098.**—Obraztsov, N. On the correct name of the family Phaloniidæ (Lepidoptera). Ent. News, Lancaster, Pa. **61** 1950 p. 198.
- 2099.**—Obraztsov, N. Neue und wenig bekannte mediterrane Tortriciden-Arten (Lep. Tortr.). Eos, Madrid **26** 1950 pp. 299-319, 14 figs.
- 2100.**—Obraztsov, N. Näheres über *Pseudeucosma tibetana* (Car.) (Lepidoptera, Tortricidae). Mitt. münchen. ent. Ges., Munich **40** 1950 pp. 243-244, 1 fig.
- 2101.**—Ochs, G. Zur Gyriniden-Fauna von Lolodorf (Kamerun). Ent. Bl., Krefeld **45-46** (1949-1950) 1950 pp. 25-30, 2 figs. [Col.]
- 2102.**—Ochs, G. Bemerkungen betr. das Artenpaar *Gyrinus natator* L. und *substriatus* Steph., sowie über die skulptierten Varianten des letzteren. Opusc. ent., Lund **15** 1950 pp. 73-75. [Col.]
- 2103.**—Ochs, G. Bemerkungen zur Gyriniden-Fauna Japan's. Opusc. ent., Lund **15** 1950 pp. 75-79. [Col.]
- 2104.**—Ochs, J. Un nouveau *Duvalius* des Basses-Alpes (Col. Trechidae). Publ. Mus. Hist. nat., Paris no. 11 1948 pp. 57-58, 1 fig.
- Ochs, J. *see* Laneyrie & Ochs.
- Ockenden, F. E. J. *see* Wise, Ockenden & Sartory.
- 2105.**—Oehme, B. G. Oeldrüsen bei der Imago von *Nosodendron fasciculare* Oliv. (Col.). Ent. Bl., Krefeld **45-46** (1949-1950) 1950 pp. 12-14, 2 figs.
- 2106.**—Oehme, B. G. Zur Frage der Enddarmresorption bei den Insekten. Verh. dtsch. zool. Mainz 1949, Leipzig 1950 pp. 314-315. [Col.]
- 2107.**—O'Farrell, A. F. The J.J.F.X. King collection of British Odonata. Entomologist, London **83** 1950 pp. 14-18, 119.
- 2108.**—Ogata, M. Studies on the male genitalia of Japanese Hesperiidae (Lepidoptera) (I, II). [In Japanese with English summary.] Trans. Kansai ent. Soc., Nishinomiya **15** 1950 pt. 1 pp. 27-34, 9 figs., pt. 2 pp. 33-47, 40 figs.
- 2109.**—Ogloblin, A. Un nuevo género de Myrmaridae de la región neotropical. Notas Mus. La Plata **14** (Zool.) 1949 no. 129 pp. 345-360, 5 pls.

2110.—Ogloblin, A. Los órganos reproductores de la langosta voladora *Schistocerca cancellata* (Serv.) (comunicación preliminar). Reun. anu. C.I.P.A. 1950, Buenos Aires 1950 pp. 116-129, 4 figs. (1 col.). [Orth.]

2111.—Ohkura, M. Notes on Carabidae (Col.). (II). [In Japanese.] Ent. Rev. Japan, Osaka 5 1950 pp. 35-36.

2112.—Ohsawa, W. & Nagasawa, S. The statistico-physiological analysis of the vital resistibilities to water, kerosene, and pyrethrin of the workers of *Cremastogaster brunnea matsumurai* Forel. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 255-276, 10 figs. [Hym.]

2113.—Oiticica, filho, J. & Michener, C. D. New species of *Bathyphlebia* from Ecuador and Peru (Lepidoptera, Saturniidae). Amer. Mus. Novit., New York no. 1446 1950 13 pp. 15 figs.

2114.—Oiticica, filho, J. & Michener, C. D. A new species of *Eacles* from Colombia (Lepidoptera, Saturniidae). Amer. Mus. Novit., New York no. 1447 1950 5 pp. 7 figs.

2115.—Okay, S. Sur les pigments des ailes rouges, bleues et jaunes des Acridiens. C.R. 13e Congr. int. Zool. Paris 1948, 1949 p. 82. [Orth.]

2116.—Okay, S. Sur le pigment brun des Orthoptères. Comm. Fac. Sci. Univ. Ankara, Instanbul 1 1948 pp. 178-186.

2117.—Oldroyd, H. Genera *Haematoptota* and *Hippocentrum* (Diptera, Fam. Tabanidae). Explor. Parc nat. Albert, Miss. de Witte (1933-1935) Brussels fasc. 67 1950 13 pp. 4 figs.

2118.—Olexa, A. Quelques espèces de Coléoptères rares de la Slovaquie orientale. [In Czech with French summary.] Acta Soc. ent. Čsl., Prague 47 1950 pp. 52-57.

2119.—Oliviera, S. J. de. Sobre duas novas espécies neotrópicas do gênero *Telmatogeton* Schiner, 1866 (Diptera, Chironomidae). Mem. Inst. Oswaldo Cruz, Rio de Janeiro 48 1950 pp. 469-477, 30 figs.; in English pp. 479-485.

2120.—Oliveira, S. J. de. Sobre uma nova espécie neotrópica do gênero *Clunio* Haliday, 1855 (Diptera, Chironomidae). Rev. brasil. Biol., Rio de Janeiro 10 1950 pp. 493-500, 17 figs.

2121.—O'Mahony, E. Irish records of introduced Coleoptera. Ent. mon. Mag., London 86 1950 pp. 72-73.

2122.—O'Mahony, E. The Hippoboscidae (Diptera) of Ireland. J. Soc. Brit. Ent., Bournemouth 3 1950 pp. 207-210.

Opfinger, E. see Beutler & Opfinger.

2123.—Opheim, M. Macro-Lepidoptera from Central Norway. Norsk ent. Tidsskr., Oslo 8 1950 pp. 91-123, 9 figs.

2124.—d'Orchymont, A. Mission scientifique de l'Omo. Coleoptera XV. Hydraenidae. Mém. Mus. Hist. nat., Paris (N.S.) 27 1948 pp. 29-62, 2 pls.

Orestano, A. see Bick, Aycock & Orestano.

2125.—Orfila, R. N. Notas sistemáticas sobre Lepidoptera Rhopalocera. Acta zool. illoana, Tucuman 8 1949 pp. 583-586.

2126.—Orfila, R. N. Nota sobre el nombre *Hamearis* Hübner. Acta zool. illoana, Tucuman 8 1949 pp. 603-605. [Lep.]

2127.—Orfila, R. N. Las especies argentinas de *Prepona* Boisd. (Lep. Nymph.). Rev. Inst. nac. Invest. Cien. nat., Buenos Aires Ci. zool. 1 1950 pp. 273-321, 1 pl. 16 figs., 6 maps.

2128.—Orfila, R. N. Clasificación de Lepidoptera Rhopalocera. Rev. Soc. ent. argent., Buenos Aires 14 1950 pp. 263-269.

2129.—Orman, D. & Jaques, H. E. A preliminary list of Hemerobiidae known to occur in Iowa. Proc. Iowa Acad. Sci., Des Moines 56 1949 p. 377. [Col.]

2130.—O'Rourke, F. J. Formic acid production among the Formicidae. Ann. ent. Soc. Amer., Columbus 43 1950 pp. 437-443. [Hym.]

2131.—O'Rourke, F. J. Myrmecological notes from Narvik, northern Norway. Norsk ent. Tidsskr., Oslo 8 1950 pp. 47-50. [Hym.]

2132.—O'Rourke, F. J. Ants as beneficial insects. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 941–945. [Hym.]

2133.—O'Rourke, F. J. The distribution and general ecology of the Irish Formicidae. Proc. R. Irish Acad., Dublin 52 Sect. B 1950 pp. 383–410. [Hym.]

2134.—Ortiz C., I. Nota sobre nuevos Ceratopogonidos hematofagos para Venezuela. Bol. Lab. Clin. "Luis Razetti", Caracas 15 1949 pp. 326–329. [Dipt.]

Ortner, A. see Galvagni & Ortner.

2135.—Ossiannilsson, F. Om två fynd av *Psectra diptera* (Burm.) (Neuroptera) i Stokholmstrakten. (With English summary.) Opusc. ent., Lund 15 1950 pp. 79–80.

2136.—Ossiannilsson, F. On the wing-coupling apparatus of the Auchenorrhyncha (Hem. Hom.). Opusc. ent., Lund 15 1950 pp. 127–130, 13 figs.

2137.—Ossiannilsson, F. On the identity of *Cicada spumaria* Linnaeus (1758) (Hem. Hom.). With notes on the breeding-plants of three Swedish Cercopids. Opusc. ent., Lund 15 1950 pp. 145–156, 4 figs.

2138.—Ossiannilsson, F. Sound-production in Psyllids (Hem. Hom.). Opusc. ent., Lund 15 1950 p. 202.

2139.—Ovazza, M. Contribution à la connaissance des fourmis des Pyrénées-Orientales. Récoltes de J. Hamon. Vie et Milieu, Paris 1 1950 pp. 93–94. [Hym.]

2140.—Overlaet, F. G. A propos des papillons de Mr. Thomas. Nat. belges, Brussels 31 1950 pp. 47–53, 2 figs. [Lep.]

2141.—Pacaud, A. Fonction glyco-génique et différenciation morphologique du mésentéron chez la larve de *Simulium costatum* Fried. (Diptère). Ann. Sci. nat., Paris (Zool.) (11) 12 1950 pp. 1–14.

2142.—Paclt, J. Les profits que la nomenclature zoologique pourrait tirer du schème international de translittération appliquée aux noms cyrilliques. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 995–998, 1 photo.

2143.—Paclt, J. & Šmelhaus, J. On the representative of the genus *Philotes* Scudd. in Czechoslovakia (Lep. Lycaenidae). [In Czech with English summary.] Acta Soc. ent. Čsl., Prague 47 1950 pp. 45–47, 3 figs.

Pagayon, A. U. see Baisas & Pagayon.

Pagés, J. see Condé & Pagés.

2144.—Pal, R. The wetting of insect cuticle. Bull. ent. Res., London 41 1950 pp. 121–139, 1 pl. 7 figs.

Palacios see Martínez Palacios.

2145.—Palau, J. M. Algunos hemípteros heterópteros de Mallorca. Graellsia, Madrid 7 1949 pp. 71–75.

2146.—Palm, N.-B. The use of vital staining methods in insect histology research. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 282–288, 9 figs.

2147.—Palm, N.-B. Parasite action on *Bombus queens*. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 289–292, 2 figs. [Hym.]

2148.—Palm, N.-B. Peristaltic movements of the Malpighian tubes. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 293–296, 6 figs.

2149.—Palm, T. För Sverige nya Coleoptera XI. Ent. Tidskr., Stockholm 71 1950 pp. 124–128, 5 figs.

2150.—Palm, T. Anteckningar om svenska skalbaggar V. Ent. Tidskr., Stockholm 71 1950 pp. 129–143, 13 figs. [Col.]

2151.—Palm, T. Coleopterfaunan i ett finmojordschakt vid Indalsälven. [With German summary.] Opusc. ent., Lund 15 1950 pp. 1–6.

2152.—Palm, T. Våra *Hypo-coelus*-arter (Col. Eucnemidae). [With German summary.] Opusc. ent., Lund 15 1950 pp. 7–10, 3 figs.

2153.—Palm, T. Våra *Dircae-* arter med särskild hänsyn till *D. australis* Fairm. (Col. Serropalpidae). [With German summary.] Opusc. ent., Lund 15 1950 pp. 11–16, 4 figs.

2154.—Palm, T. & Bergvall, J. R. Våra *Euthia*-arter (Col. Scydmaenidae). Ent. Tidskr., Stockholm 71 1950 pp. 120–123, 23 figs.

2155.—Palmén, E. Sea-drifts of insects as a factor in dispersal. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 450–453.

Palmén, E. *see* Franz & Palmén.

2156.—Pant, G. D. & Chatterjee, N. C. A list of described immature stages of Indian Lepidoptera. Part 1. Rhopalocera. Indian For. Rec., Delhi (N.S.) Ent. 7 (1949) 1950 pp. 213–255.

2157.—Pant, N. C. & Fraenkel, G. The function of the symbiotic yeasts of two insect species, *Lasioderma serricorne* F. and *Stegobium (Sitedrepa) paniceum* L. Science, Lancaster, Pa. 112 1950 pp. 498–500, 2 figs. [Col.]

2158.—Papp, C. S. Verzeichnis der von Dr. Carl Fiedler beschriebenen südamerikanischen Cryptorhynchinen (Col. Curculionidae). I. Ark. Zool., Stockholm (2) 1 1950 no. 11 pp. 147–172.

2159.—Papp, C. S. Zwei neue *Cryptocephalus* aus Columbien (Coleoptera: Chrysomelidae). Bol. Soc. portug. Ciênc. nat., Lisbon 18 1950 pp. 85–88, 2 figs.

2160.—Papp, C. S. Einige neue Beiträge zur Kenntnis der Chrysomeliden-Fauna. Misc. ent., Paris 46 1949 pp. 11–16, 1 pl. [Col.]

2161.—Papp, C. S. Einige Bemerkungen zur Kenntnis europäischer und afrikanischer Cicindeliden nebst einer kleinen Bestimmungstabelle. Misc. ent., Paris 46 1949 pp. 62–70, figs. [Col.]

2162.—Paramonov, S. J. Notes on Australian Diptera (I–V). Ann. Mag. nat. Hist., London (12) 3 1950 pp. 515–534.

2163.—Paramonov, S. J. A review of the Australian Mydaidae (Diptera). Bull. Commonw. sci. industr. Res. Org., Melbourne no. 255 1950 32 pp.

2164.—Paramonov, S. J. Bestimmungstabelle der *Usia*-Arten der Welt (Bombyliidae, Diptera). Eos, Madrid 26 1950 pp. 341–378.

2165.—Paramonov, S. J. A new African *Apiocera* species (Apioceridae, Diptera). J. ent. Soc. sthn Africa, Pretoria 13 1950 pp. 103–105.

2166.—Paramonov, S. J. Zur Kenntnis der paläarktischen Arten der Gruppe von *Exoprosopa iris* Lw. (Bombyliidae, Diptera). Zool. Anz., Leipzig 144 1943 pp. 52–55.

2167.—Paramonov, S. J. Zur Kenntnis der Gattung *Symmictoides* Beq. (Nemestrinidae, Diptera). Zool. Anz., Leipzig 144 1943 pp. 56–59.

Paramonov, S. J. *see* Waterhouse & Paramonov.

2168.—Pardi, L. Sui primi processi dello sviluppo nelle uova fecondate di femmine tetraploidi-partenogenetiche di *Solenobia triquetrella* F.R. (Lepidopt.-Psychidae). Nota preliminare. Caryologia, Pisa 2 1950 pp. 365–369, 2 figs.

2169.—Pardi, L. I primi processi dello sviluppo nell'uovo fecondato delle razze tetraploidipartenogenetiche di *Solenobia triquetrella* F.R. (Lepidoptera-Psychidae). Chromosoma, Berlin 4 1950 pp. 108–147, 25 figs.

2170.—Park, T. & Frank, M. B. The fecundity and development of the flour beetles, *Tribolium confusum* and *Tribolium castaneum*, at three constant temperatures. Ecology, Durham, N.C. 29 1948 pp. 368–374, 2 figs. [Col.]

2171.—Park, T. & Frank, M. B. The population history of *Tribolium* free of sporozoan infection. J. Anim. Ecol., London 19 1950 pp. 95–105, 3 figs. [Col.]

2172.—Parker, A. H. Studies on the eggs of certain biting midges (*Culicoides* Latreille) occurring in Scotland. Proc. R. ent. Soc. London (A) 25 1950 pp. 43–52. [Dipt.]

Parker, H. L. *see* Berry & Parker.

Parr, W. J. *see* Speyer & Parr.

2173.—Pasquier, R. Sur une des causes de la grégarisation chez les acridiens: la densation. Ann. Inst. agric. Serv. Tech. Expérém. agric. Algérie, Algiers 5 1950 fasc. 9, 9 pp. [Orth.]

2174.—Pasteels, J. Les Strepsiptères. Bull. Ann. Soc. ent. Belg., Brussels 86 1950 pp. 18–28. [Col.]

2175.—**Pasteels, J.** Sur des Ten-thredinoidea africains du Muséum national d'Histoire naturelle. Rev. franç. Ent., Paris **17** 1950 pp. 271-280, 1 fig. [Hym.]

2176.—**Pasteels, J.** Sur des Strep-siptères du Congo belge. Rev. Zool. Bot. afr., Bruxelles **43** 1950 pp. 281-291, 6 figs. [Col.]

2177.—**Patočka, J.** La chrysalide de la Géometride *Therapis evonymaria* Schiff. (Lep.). [In Czech with French summary.] Acta Soc. ent. Čsl., Prague **47** 1950 pp. 58-60, 2 figs.

2178.—**Patočka, J.** Les plus remarquants Lépidoptères du sud-est de la Slovaquie. [In Czech with French summary.] Prírod. Sborník, Bratislava **4** 1949 pp. 162-165.

2179.—**Patryn, W.** Appendices about butterflies III. [In Polish with English summary.] Polsk. Pismo ent., Wrocław **19** (1949) 1950 pp. 327-330. [Lep.]

Patton, R. L. see Auclair & Patton.

2180.—**Paul, W. & Schubert, G.** Ueber biologische Wirkungen schneller Elektronen eines 6-MeV-Betatrons. Z. Naturf., Tübingen **5b** 1950 pp. 390-394, 5 figs. [Dipt.]

Paul, W. see Dittrich, Höhne, Paul & Schubert.

2181.—**Paulian, R.** Les Corylo-phidae d'Afrique (Coleoptera). Mém. Inst. franç. Afr. noire, Dakar no. 12 1950 126 pp. 86 figs.

2182.—**Paulian, R.** Recherches sur les insectes d'importance biologique à Madagascar. X. *Nephrotettix apicalis* Motsch. la Cicadelle du riz (Hémipt. Cicadellidae). Mém. Inst. sci. Madagascar, Tananarive **4A** 1950 pp. 75-82, 5 figs.

2183.—**Paulian, R.** La vie larvaire des insectes. Mém. Mus. Hist. nat., Paris (N.S.) **30** 1950 pp. 1-206, 5 pls. 123 figs.

2184.—**Paulian, R.** Etudes sur les lépidoptères malgaches. Nat. malgache, Tananarive **2** 1950 pp. 51-52, 2 figs.

2185.—**Paulian, R.** L'île Europa —une dépendance de Madagascar. Nat. Malgache, Tananarive **2** 1950 pp. 77-85, 1 map.

2186.—**Paulian, R.** Les moustiques des *Nepenthes* à Madagascar. Nat. Malgache, Tananarive **2** 1950 pp. 119-121, 1 fig. [Dipt.]

2187.—**Paulian, R.** Observations sur la faune entomologique des nids de Ploceinae. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 454-456.

2188.—**Paulian, R. & Delamare-Debouteville, C.** Sur quelques insectes guanobies de la Côte-d'Ivoire. Publ. Mus. Hist. nat., Paris no. 10 1948 pp. 63-68, 4 figs.

2189.—**Pautsch, F.** The effect of monochromatic light on the melanin formation in the walking stick *Dixippus morosus*. Bull. int. Acad. polon. Sci. Lett., Cracovie (BII) **1949** 1950 pp. 277-287. [Orth.]

2190.—**Pavan, C., Dobzhansky, T. & Burla, H.** Diurnal behavior of some Neotropical species of *Drosophila*. Ecology, Durham, N.C. **31** 1950 pp 36-43, 4 figs. [Dipt.]

Pavan, C. see Breuer & Pavan; Burla, Brito da Cunha, Cavalcanti, Dobzhansky & Pavan; Burla, Brito da Cunha, Cordeiro, Dobzhansky, Malogolowkin & Pavan; Dobzhansky & Pavan.

2191.—**Pavan, M.** Ricerche sperimentali sul comportamento degli Artropodi. I. Apparecchio per lo studio delle tassie. Boll. Soc. ent. ital., Genoa **80** 1950 pp. 27-32, 4 figs.

2192.—**Pavan, M. & Ronchetti, G.** Sistematica, iconografia e distribuzione geografica del genere *Boldoria* (Col. Catopidae). Mem. Soc. ent. ital., Genova **29** 1950 pp. 97-103, 1 fig. pl.

2193.—[**Pavlovskii, E. N. & Vinogradov, B. S.**] (Ed.) Animal world of USSR. Vol. 2. Desert zones. [In Russian.] Moscow. & Leningrad. Izd. Akad. Nauk SSSR 1948 420 pp. 211 figs.

2194.—**Pax, F.** Praktische Verwendung von Termiten und Termiten-Nestern. Natur u. Volk, Frankfurt a. M. **80** 1950 pp. 264-271, 5 figs. [Isopt.]

- 2195.—Pazsiczky, S. Interessante Lepidopterenfunde aus der Umgebung von Kaposcár (Südwestungarn). [In Magyar with German summary.] *Folia ent. hung.*, Budapest 7 1942 pp. 65–72, 3 pls. 4 figs.
- 2196.—Peacock, A. D. Studies in Pharaoh's ant, *Monomorium pharaonis* (L.) 2, 4. *Ent. mon. Mag.*, London 86 1950 pp. 129–135, 1 fig., 294–298. [Hym.]
- 2197.—Peacock, A. D. & Baxter, A. T. Studies in Pharaoh's ant, *Monomorium pharaonis* (L.) 3. *Ent. mon. Mag.*, London 86 1950 pp. 171–178. [Hym.]
- 2198.—Peklo, J. & Šatava, J. Fixation of free nitrogen by insects. *Experientia*, Basle 6 1950 pp. 190–192, 3 figs.
- Pellegrino, J. see Schreiber & Pellegrino.
- 2199.—Penn, G. H. Observations on the nocturnal habits of adult dragonflies (Odonata). *Proc. ent. Soc. Washington* 52 1950 pp. 88–90.
- 2200.—Penn, G. H. & Golusmith, R. M. The life history of the southern water-strider, *Gerris canaliculatus* (Hemiptera, Gerridae). *J. Tenn. Acad. Sci.*, Nashville 25 1950 pp. 76–79.
- 2201.—Pennak, R. W. First record of adult mountain midges from North America (Diptera: Deuterophlebiidae). *Ent. News*, Lancaster, Pa. 61 1950 p. 36.
- 2202.—Pepper, J. O. Six new Aphids from Pennsylvania. *Florida Ent.*, Gainesville 33 1950 pp. 3–15, 2 pls. [Hem.]
- 2203.—[Perepel'skiĭ, A. A.] On the existence of a specific insect fauna on the Oka. [In Russian.] *C.R. Acad. Sci. URSS, Moscow (N.S.)* 70 1950 pp. 1087–1088.
- Pereira Barretto see Barretto.
- Perrier, D. see Gouguenheim, Perrier & Rungs.
- 2204.—Perry, W. J. Biological and crossbreeding studies on *Aedes hebitdeus* and *Aedes pernotatus* (Diptera, Culicidae). *Ann. ent. Soc. Amer.*, Columbus 43 1950 pp. 123–136, 6 figs.
- 2205.—Perttunen, V. Experiments on the humidity reactions of some tsetse fly species (Dipt., Muscidae). *Ann. ent. fenn.*, Helsinki 16 1950 pp. 41–44.
- 2206.—Pesson, P. Sur un phénomène de phoresie des spermatozoïdes par des cellules oviductaires, chez *Aspidiotus ostreaeformis* Curt. (Hemiptera — Homoptera — Coccoidea). *Proc. 8th int. Congr. Ent. Stockholm* 1948, 1950 pp. 566–570, 4 figs.
- 2207.—Peter, K. Die Variabilität von *Pieris bryoniae* O. innerhalb einer Population (Lep.). *Mitt. münchen. ent. Ges.*, Munich 40 1950 pp. 181–202.
- 2208.—Petersen, B. On the evolution of *Pieris napi* L. Evolution, Lancaster, Pa. 3 (1949) 1950 pp. 269–278, 5 figs. [Lep.]
- 2209.—Petersen, B. A method for experimental studies on Batesian mimicry. *Proc. 8th int. Congr. Ent. Stockholm* 1948, 1950 pp. 457–459, 1 fig.
- 2210.—Petit, G. & Delamare-Debouteville, C. Remarques sur le peuplement du canal souterrain de Villeneuve-de-la-Raho. *Vie et Milieu*, Paris 1 1950 pp. 474–476.
- [Petrishcheva, P. A.] see Pavlovskii & Vinogradov.
- 2211.—Peus, F. Der Formenkreis des *Ctenophthalmus agyrtes* Heller (Insecta, Aphaniptera). Eine Skizze über seine Struktur und über das Wesen und die Entstehung seiner Rassen. *Syllegomena biol. Festschr. Kleinschmidt*, Wittenberg 1950 pp. 286–318, 9 figs.
- 2212.—Peyerimhoff, P. de. Les Curculionidae Cossoninae (Col.) et l'influence maritime. *Proc. 8th int. Congr. Ent. Stockholm* 1948, 1950 pp. 460–474.
- 2213.—Pfaff, W. Die Dicke der Kuticula bei Blattläusen. *Z. PfKrankh.*, Stuttgart 56 (1949) [1950] pp. 293–294. [Hem.]
- 2214.—Pfeiffer, H. H. Beugungs-polarisatorische Messungen an isotropisch und an isometrisch kontrahierten Insektenmuskeln. *Protoplasma*, Berlin 36 1942 pp. 444–449, 3 figs.

- Pfäster, R.** see Rosin & Pfister.
- 2215.—Pflugfelder, O.** Geschwulstartige Wucherungen embryonaler Transplante in *Carausius (Dixippus) morosus*, nach experimenteller Störung des Hormonhaushaltes. Biol. Zbl., Leipzig **66** 1947 pp. 170–179, 9 figs. [Orth.]
- 2216.—Pflugfelder, O.** Ueber die Ventraldrüsen und einige andere inkretorische Organe des Insektenkopfes. Biol. Zbl., Leipzig **66** 1947 pp. 211–235, 32 figs.
- 2217.—Pflugfelder, O.** Die Entwicklung embryonaler Teile von *Carausius (Dixippus) morosus* in der Kopfkapsel von Larven und Imagines. Biol. Zbl., Leipzig **66** 1947 pp. 372–387, 11 figs. [Orth.]
- 2218.—Pflugfelder, O.** Die Funktion der pericardialdrüsen der Insekten. Verh. dtsch. Zool. Mainz 1949, Leipzig 1950 pp. 169–173, 3 figs.
- 2219.—Philip, A.** Description of one new species of *Strumeta* Walker (Trypetidae : Diptera) from Burma and a record of one far-eastern species of the genus from India. Indian J. Ent., New Delhi **10** (1948) 1950 pp. 31–32, 2 figs.
- Philip, B.** see Lagermalm, Philip & Gralén.
- 2220.—Philip, C. B.** Corrections and addenda to a catalog of Nearctic Tabanidae. Amer. Midl. Nat., Notre Dame **43** 1950 pp. 430–437. [Dipt.]
- 2221.—Philip, C. B.** New North American Tabanidae (Diptera), Parts I–III. Ann. ent. Soc. Amer., Columbus **42** (1949) 1950 pp. 451–460, 2 figs.; **43** 1950 pp. 115–122, 2 figs., 240–248.
- 2222.—Phipps, J.** The maturation of the ovaries and the relation between weight and maturity in *Locusta migratoria migratorioides* (R. & F.). Bull. ent. Res., London **40** 1950 pp. 539–557, 15 figs. [Orth.]
- 2223.—Pic, M.** Malachides exotiques nouveaux (Col.). Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 997–998.
- 2224.—Pic, M.** Nouveaux Dasytides (Coléoptères) de l'Afrique australie. Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 998–1000.
- 2225.—Pic, M.** Nouveaux Coléoptères d'Afrique. Bull. Inst. franç. Afr. noire, Dakar **12** 1950 pp. 72–74.
- 2226.—Pic, M.** Sur quelques Hétéromères africains (Coleoptera). Bull. Inst. franç. Afr. noire, Dakar **12** 1950 pp. 927–929.
- 2227.—Pic, M.** Sur quelques *Macrosiagon* Hentz américains (Col. Rhipiphoridae). Bull. Soc. ent. France, Paris **55** 1950 pp. 94–95.
- 2228.—Pic, M.** Deux nouveaux Coléoptères d'Egypte et Nubie. Bull. Soc. Fouad 1er Ent., Cairo **34** 1950 pp. 23–24.
- 2229.—Pic, M.** L'élevage des insectes en chambre. Bull. Un. Soc. franç. Hist. nat., Versailles no. 3 1950 pp. 74–76.
- 2230.—Pic, M.** Cinq nouveaux Coléoptères du Maroc. C.R. Soc. Sci. nat. Maroc, Rabat **1950** 1950 no. 6 pp. 92–94.
- 2231.—Pic, M.** Coléoptères du globe. [Contd.] Echange, Moulins **63** 1947 pp. 9–16; **64** 1948 pp. 1–4, 6–16; **65** 1949 pp. 1–16; **66** 1950 pp. 1–16.
- 2232.—Pic, M.** Tenthredoides en partie nouveaux (Hymén.). Echange, Moulins **64** 1948 pp. 5–6.
- 2233.—Pic, M.** Opuscula martialis I–VII, Opuscula martialia VIII–XIII (16 pp. in each number). Echange, Moulins Num. sp. 1940–1944. [Col.]
- 2234.—Pic, M.** Deux nouveaux Clérides de Madagascar. Ent. Ber., Amsterdam **13** 1950 p. 105. [Col.]
- 2235.—Pic, M.** Nouveaux Clytini asiatiques. Longicornia, Paris **1** 1950 pp. 507–509. [Col.]
- 2236.—Pic, M.** Contribution à l'étude de l'Air. Coléoptères Malacodermoidea et Heteromoidea (pp. 145–153, 2 figs.); Cleridae, Anobiidae et Dermestidae (pp. 180–182, 1 fig.); Chrysomelidae, descriptions d'espèces nouvelles (pp. 203–207); Bruchidae (p. 211). Mém. Inst. franç. Afr. noire, Paris no. 10.
- 2237.—Pic, M.** Contribution à l'étude du genre *Phoeocyclotomus* Kuw. Rev. Zool. Bot. afr., Brussels **43** 1950 pp. 145–151. [Col.]

2238.—**Pic, M.** Nouveaux Clérides, originaires surtout du Congo belge (Col.). Rev. Zool. Bot. afr., Brussels **43** 1950 pp. 152–163.

2239.—**Pic, M.** Coléoptères nouveaux du Congo de diverses familles. Rev. Zool. Bot. afr., Brussels **43** 1950 pp. 356–362.

2240.—**Picard, J.** Hesperiidae du Liberia collectés par P. L. Dekeyser et B. Holas. Bull. Inst. franç. Afr. noire, Dakar **12** 1950 pp. 625–628. [Lep.]

2241.—**Picard, J.** Etudes sur les Hesperiidae du Maroc. Bull. Soc. Sci. nat. Maroc, Rabat **28** (1948) 1950 pp. 110–135. [Lep.]

2242.—**Picard, J.** Nouvelles notes sur *Pyrgus (Pyrgus) malvae* Lin. Rev. franç. Lép., Paris **12** 1950 pp. 241–245.

2243.—**Pick, F.** L'inclusion temporaire des œufs d'*Aedes aegypti* à l'aide de la technique de silico-gel sur lame. Bull. Soc. Path. exot., Paris **43** 1950 pp. 364–372. [Dipt.]

2244.—**Piepho, H.** Versuche über die Rolle von Wirkstoffen in der Metamorphose der Schmetterlinge. Biol. Zbl., Leipzig **65** 1946 pp. 141–148. [Lep.]

2245.—**Piepho, H.** Ueber das Ausmass der Artunspezifität von Metamorphosehormonen bei Insekten. Biol. Zbl., Leipzig **69** 1950 pp. 1–10, 4 figs.

2246.—**Piepho, H.** Ueber die Hemmung der Falterhäutung durch Corpora allata. Untersuchungen an der Wachsmotte *Galleria mellonella* L. Biol. Zbl., Leipzig **69** 1950 pp. 261–271, 5 figs. [Lep.]

2247.—**Piepho, H.** Hormonale Grundlagen der Spinnätigkeit bei Schmetterlingsraupen. Z. Tierpsychol., Berlin **7** 1950 pp. 424–434, 1 fig. [Lep.]

2248.—**Pierce, W. D.** Fossil Arthropods of British Columbia. Bull. S. Calif. Acad. Sci., Los Angeles **49** 1950 pp. 3–9, 1 pl.

2249.—**Pierce, W. D.** Fossil arthropods from onyx marble. Bull. S. Calif. Acad. Sci., Los Angeles **49** 1950 pp. 101–104, 2 figs. [Thysanura.]

2250.—**Pierce, W. D.** When does a thing become a fossil? Bull. S. Calif. Acad. Sci., Los Angeles **49** 1950 pp. 105–107.

2251.—**Pillon, M.** Recherches sur l'hypopharynx de *Machilis annulicornis* L. (I.). Bull. sci. Bourgogne, Dijon Suppl. no. 6 1950 26 pp. 3 pls. [Thysanura.]

2252.—**Pinhey, E. C. G.** New species of Odonata from southern Africa. Ann. Transv. Mus., Pretoria **21** 1950 pp. 260–272, 30 figs.

2253.—**Pinniger, E. B.** Notes on some rare dragonflies. Trans. S. London ent. nat. Hist. Soc. **1948–49** 1950 pp. 161–164, 1 pl.

Pinto Serra, O. see Forattini & Pinto Serra.

2254.—**Piotrowski, F.** Sur la morphologie de l'appareil copulateur mâle des Hémiptères—Hétéroptères avec considération spéciale du groupe Pentatomoidaria Börner 1934. [In Polish with French summary.] Prace Kom. biol. Wydz. mat.-przyr. poznań. Tow. Przyj. Nauk **12** 1950 no. 5, 38 [+iii] pp. 8 pls. 1 fldg. table.

2255.—**Pittendrigh, C. S.** The quantitative evaluation of *Kerteszia* breeding grounds. Amer. J. trop. Med., Baltimore **30** 1950 pp. 457–468, 4 figs. [Dipt.]

2256.—**Pittendrigh, C. S.** The ecoclimatic divergence of *Anopheles bellator* and *A. homunculus*. Evolution, Lancaster, Pa. **4** 1950 pp. 43–63, 10 figs. [Dipt.]

2257.—**Pittendrigh, C. S.** The ecotype specialization of *Anopheles homunculus*, and its relation to competition with *A. bellator*. Evolution, Lancaster, Pa. **4** 1950 pp. 64–78, 3 figs. [Dipt.]

2258.—**Pittoni, B.** On the insect fauna of Cyprus. Results of the expedition of 1939 by Harald, Håkan and P. H. Lindberg. V. Hymenoptera aculeata. I. Diptera, Fossores und Apoidea der Insel Cyprus. Comment. biol., Helsingfors **10** 1950 no. 12, 94 pp. 23 figs.

2259.—**Pittoni, B. & Stöckhert, E.** Ueber einige neue und verkannte *Andrena*-Arten (Hymenoptera, Andrenidae). Beiträge zur Kenntnis der

paläarktischer Apiden. III. Ann. naturh. Mus. Wien **57** (1949-1950) 1950 pp. 284-295.

Piza see Toledo Piza.

Plaine, H. I. see Glass & Plaine.

Platonova, G. N. see Levinson & Platonova.

2260.-Pleskot, G. Der Stand der biologischen Fließwasserforschung. Verh. dtsch. zool. Mainz 1949, Leipzig 1950 pp. 277-288, 4 figs.

2261.-Podány, C. Les nouvelles formes de Longicornes (Col. Cerambyc.). [In Czech with French summary.] Acta Soc. ent. Čsl., Prague **47** 1950 pp. 19-21, 5 figs.

2262.-Poisson, R. A propos d'un Helotrephidae nouveau de l'Afrique éthiopienne (Hémiptère—Hétéroptère). C.R. Acad. Sci., Paris **239** 1950 pp. 680-681.

2263.-Poisson, R. Contribution à l'étude de l'Air. Hémiptères aquatiques. Mém. Inst. franç. Afr. noire, Paris no. 10 1950 pp. 316-317.

2264.-Poisson, R. Sur quelques espèces nouvelles d'Hydrocorisés des collections du Musée du Congo Belge. Rev. Zool. Bot. afr., Brussels **43** 1950 pp. 67-91, 25 figs. [Hem.]

2265.-Polentz, G. Beiträge zur Kenntnis der Käfer des Harzes. Ent. Bl., Krefeld **45-46** (1949-1950) 1950 pp. 10-12.

2266.-Polonovski, M. & Busnel, R. G. Sur les pigments ptériniques de l'aile et de l'oeuf de *Bombyx mori* L. C.R. Acad. Sci., Paris **230** 1950 pp. 585-587. [Lep.]

Polonovski, M. see Busnel, Levy & Polonovski.

Pons, R. see Labeyrie & Pons.

2267.-Popham, E. J. Water bugs (Hemiptera-Heteroptera) of North Surrey. J. Soc. Brit. Ent., Bournemouth **3** 1950 pp. 158-173.

2268.-Popov, G. Note on the genus *Bibulus* I. Bolivar, 1914 (Orthoptera: Acrididae). Proc. R. ent. Soc. London (B) **19** 1950 pp. 133-135, 15 figs.

2269.-[Popov, V. V.] Generic groupings of Central Asiatic Apidae of the subfamily Anthidiinae (Hymenoptera, Megachilidae). [In Russian.] C.R. Acad. Sci. URSS, Moscow (N.S.) **70** 1950 pp. 315-318, 1 fig.

[Popov, V. V.] see Pavlovskii & Vinogradov.

2270.-Popovici-Baznosanu, A. Zweiter Beitrag über sekundäre Geschlechtsunterschiede bei Coleopteren. Zool. Anz., Leipzig **142** 1943 pp. 236-240, 8 figs.

2271.-Portela Feijão, M. S. Breve estudo morfológico do *Pseudococcus citri* Risso. Agronomia angolana, Luanda no. 4 1950 pp. 159-166. [Hem.]

2272.-Poschinger, F. v. Beitrag zur Kenntnis der Koleopterenaufa des Donautales und des Bayrischen Waldes. Ent. Bl., Krefeld **45-46** (1949-1950) 1950 pp. 18-21.

2273.-Poschinger, F. v. & Korell, A. Additamenta corrigenda. Ent. Bl., Krefeld **45-46** (1949-1950) 1950 pp. 14-16. [Col.]

2274.-Possompès, B. Implantation fractionnée de l'anneau de Weismann chez des larves permanentes de *Calliphora erythrocephala* Meig. C.R. Acad. Sci., Paris **230** 1950 pp. 409-411, 1 fig. [Dipt.]

2275.-Possompès, B. Rôle du cerveau au cours de la métamorphose de *Calliphora erythrocephala* Meig. C.R. Acad. Sci., Paris **231** 1950 pp. 594-596. [Dipt.]

2276.-Possompès, B. Expériences d'ablation et d'implantation du système nerveux et de l'anneau de Weissmann chez la larve de *Calliphora erythrocephala* Meig. C.R. 13e Congr. int. Zool. Paris 1948, 1949 pp. 474-475. [Dipt.]

2277.-Post, R. L. & Anderson, J. R. Devices for marking insects. Bi-m. Bull. N. Dakota agric. Exp. Sta., Fargo **13** 1950 pp. 81-82.

Poulson, D. F. see Demerec, M. **Povolný**, D. see Gregor & Povolný.

2278.-Povolný, F. G-D. Sur quelques Lépidoptères intéressants de la Tchécoslovaquie. [In Czech.] Acta Soc. ent. Čsl., Prague **47** 1950 pp. 166-168, 3 figs.

- 2279.—Power, M. E. The central nervous system of winged but flightless *Drosophila melanogaster*. An experimental study of the relation between motor ability and neuromorphogenesis. *J. exp. Zool.*, Philadelphia, Pa. **115** 1950 pp. 315–339, 3 pls. [Dipt.]
- 2280.—Prabhaker Rao, V. A new species of mealy bug from India. *Indian J. Ent.*, New Delhi **9** (1947) 1950 pp. 15–18, 10 figs. [Hem.]
- 2281.—Prabhaker Rao, V. The status of the genus *Perissopneumon* Newstead and description of the new genus *Misracoccus* (Hemiptera : Coccoidea). *Proc. R. ent. Soc. London (B)* **19** 1950 pp. 114–120, 20 figs.
- 2282.—Pratt, H. D. & Lane, J. E. Rediscovery of *Tarsopsylla coloradensis* (Baker) in Colorado (Siphonaptera, Dolichopsyllidae). *Proc. ent. Soc. Washington* **52** 1950 pp. 305–307, 1 pl.
- Pratt, jr., J. J. see Babers & Pratt.
- 2283.—Price, H. F. Notes on the dragonflies (Odonata) of northwestern Ohio. *Ohio J. Sci.*, Columbus **50** 1950 pp. 71–78.
- 2284.—Priesner, H. Contributions towards a knowledge of the Thysanoptera of Egypt, XV. *Bull. Soc. Fouad Ier Ent.*, Cairo **34** 1950 pp. 25–37, 14 figs.
- 2285.—Priesner, H. Studies on the genus *Scolothrips* (Thysanoptera). *Bull. Soc. Fouad Ier Ent.*, Cairo **34** 1950 pp. 39–68, 7 figs.
- 2286.—Priesner, H. Further studies in *Haplothrips* and allied genera (Thysanoptera). *Bull. Soc. Fouad Ier Ent.*, Cairo **34** 1950 pp. 69–120, 1 pl.
- 2287.—Princis, K. Entomological results from the Swedish Expedition 1934 to Burma and British India. Blattariae. Collected by René Malaise. *Ark. Zool.*, Stockholm (2) **1** 1950 pp. 203–222, 16 figs. [Orth.]
- 2288.—Princis, K. On a collection of Blattaria in the Zoological Museum of the University of Oslo. *Norsk ent. Tidsskr.*, Oslo **8** 1950 pp. 129–134, 5 figs. [Orth.]
- 2289.—Princis, K. Indomalaiische und australische Blattarien aus dem Entomologischen Museum der Universität in Lund. *Opusc. ent.*, Lund **15** 1950 pp. 161–188, 32 figs. [Orth.]
- 2290.—Pumphrey, R. J. Hearing. *Symposia Soc. exp. Biol.*, Cambridge no. 4 1950 pp. 3–18, 6 figs.
- 2291.—Punt, A. The respiration of insects. *Physiol. comp. oecol.*, The Hague **2** 1950 pp. 59–74, 19 figs.
- 2292.—Qadri, M. A. H. On the digestive system and the skeleto-muscular structures of the head capsule in the mango-hoppers, *Idiocerus niveosparsus* (Leth.) and *Idiocerus clypealis* (Leth.) (Homoptera : Jasididae). *Proc. zool. Soc. Bengal, Calcutta* **2** 1949 pp. 43–55, 8 figs.
- 2293.—Qadri, M. A. H. & Aziz, A. On Indian insect types. II. Biology, life-history, and external and internal anatomy of *Pyrilla perpusilla* Walker. *Aligarh Muslim Univ. Publ. (Zool. Ser.)* no. 2 1950 [1+] 33 [+7] pp. 8 pls. [Hem.]
- Quate, L. W. see Middlekauff & Quate.
- 2294.—Quay, W. B. Further description of *Polyplax alaskensis* Ewing (Anoplura). *Psyche*, Cambridge, Mass. **56** (1949) 1950 pp. 180–183, 2 figs.
- 2295.—Quentin, R. M. Sur un accouplement aberrant de Diptères. *Rev. franç. Ent.*, Paris **17** 1950 pp. 47–48.
- 2296.—Quézel, P., Verdier, P. & Rioux, J. A. Considérations systématiques et écologiques sur quelques *Pterostichus* du groupe *cristatus*. *Vie et Milieu*, Paris **1** 1950 pp. 310–325. [Col.]
- Quézel, P. see Verdier, Quézel & Rioux.
- 2297.—Quisenberry, B. F. The genus *Euaresta* in the United States (Diptera : Tephritidae). *J. New York ent. Soc.* **58** 1950 pp. 9–38, 3 pls.
- 2298.—Rabaud, E. Espèces rares et espèces communes. *Vie et Milieu*, Paris **1** 1950 pp. 265–276.

2299.—Rachou, R. G., Ricciardi, I. & Guedes, A. S. Registro de algumas espécies de Anofélinos no Paraguai. Rev. bras. Malaria, Rio de Janeiro **2** 1950 pp. 231–233. [Dipt.]

2300.—Rachou, R. G. & Sousa, J. de. Do encontro de um exemplar de *A. (M.) nigratarsis* (Chagas, 1907) no estado do Paraná. Rev. bras. Malaria, Rio de Janeiro **2** 1950 pp. 234–238, 2 figs. [Dipt.]

2301.—Radovanović, M. Ueber zwei neue Trichopteren-Arten aus Mazedonien. Zool. Anz., Leipzig **140** 1942 pp. 183–190, 6 figs.

2302.—Raffy, A. L'auto-stérilisation chez les chrysalides de *Bombyx mori* L. C.R. Acad. Sci., Paris **231** 1950 pp. 1345–1346. [Lep.]

2303.—Rainey, R. C. The embryonic respiration of the sheep blowfly, *Lucilia sericata* Mg. Proc. R. ent. Soc. London (A) **25** 1950 pp. 87–92, 2 figs. [Dipt.]

2304.—Rakshpal, R. Notes on the biology of *Bagrada cruciferarum* Kirk. Indian J. Ent., New Delhi **11** (1949) 1950 pp. 11–16. [Hem.]

Rambier, A. see Delmas & Rambier.

Ramas Menon see Menon.

2305.—Ramme, M. Neues zur Gattung *Hyphynomos* Uvarov (Orth. Tettig.). Ent. NachrBl. öst. schweiz. Ent., Vienna **2** 1950 pp. 76–79, 2 figs.

2306.—Rammner, W. Nektar als Nahrung einheimischer Wanzen. Zool. Anz., Leipzig **140** 1942 pp. 133–137. [Hem.]

2307.—Ramsay, J. A. Osmotic regulation in mosquito larvae. J. exp. Biol., London **27** 1950 pp. 145–157, 1 pl. 2 figs. [Dipt.]

2308.—Ranaweera, D. J. W. Observations on the life-cycle of a Chalcid parasite *Tetrastichus coccinellae* Kurdj. Indian J. Ent., New Delhi **9** (1947) 1950 pp. 1–6, 2 figs. [Hym.]

2309.—Ranaweera, D. J. W. Three new species of *Tetrastichus*. Indian J. Ent., New Delhi **9** (1947) 1950 pp. 7–13, 3 figs. [Hym.]

2310.—Ranaweera, D. J. W. Observations on the life-history of *Bethylus distigma* Motschulsky (*Goniozus montanus* Kieff.) (Insecta, Hymenoptera, Bethylidae). J. zool. Soc. India, Calcutta **2** 1950 pp. 127–132, 4 figs.

Rao see Prabhaker Rao.

Rao, D. see Seshagiri Rao.

2311.—Rao, S. N. Descriptions of one new genus and three new species of gall midges (Itonididae : Diptera), causing galls on mango in India. Indian J. Ent., New Delhi **10** (1948) 1950 pp. 33–40, 25 figs.

2312.—Ratkovich, M. Primera lista de insectos tucumanos útiles. Publ. misc. Est. exp. Agríc. Tucumán, no. 5 1950 33 pp.

2313.—Rawson, G. W. & Ziegler, J. B. A new species of *Mitoura* Scudder from the Pine Barrens of New Jersey (Lepidoptera, Lycaenidae). J. New York ent. Soc. **58** 1950 pp. 69–80, 2 pls. 2 figs.

2314.—Rayment, T. A new and remarkable organ on a resin bee. Vict. Nat., Melbourne **66** 1950 pp. 163–168. [Hym.]

2315.—Rayment, T. Sex-linked characters in bees. Vict. Nat., Melbourne **66** 1950 pp. 233–238, 1 pl. 1 fig. [Hym.]

2316.—Rayment, T. New bees and wasps—Parts XIII, XIV. Vict. Nat., Melbourne **67** 1950 pp. 20–25, 1 pl., 101–111, 2 pls. [Hym.]

2317.—Reed, S. C. & E. W. Natural selection in laboratory populations of *Drosophila*. II. Competition between a white-eye gene and its wild type allele. Evolution, Lancaster, Pa. **4** 1950 pp. 34–42, 2 figs. [Dipt.]

Reeves, W. C. see Brookman & Reeves.

2318.—Rehfous, M. Deuxième note sur diverses espèces méridionales de Lépidoptères rencontrées dans la région de Genève. Mitt. schweiz. ent. Ges., Berne **23** 1950 pp. 417–431.

2319.—Rehm, M. Sekretionsperioden des neurosekretorischer Zellen im Gehirn von *Ephestia kühniella*. Z. Naturf., Tübingen **5b** 1950 pp. 167–169, 2 figs. [Lep.]

2320.—**Rehn, J. A. G.** Studies in the group Dysoniae (Aphidinae of authors) (Orthoptera : Tettigoniidae : Phaneropterinae) (Part I). Trans. Amer. ent. Soc., Philadelphia **75** 1950 pp. 271–320, 3 pls. 21 figs.

2321.—**Rehn, J. W. H.** A key to the genera of North American Blattaria, including established adventives. Ent. News, Lancaster, Pa. **61** 1950 pp. 64–67. [Orth.]

2322.—**Rehn, J. W. H.** Notes on some aquatic insects of the Brandywine Creek Drainage, Chester County, Pennsylvania. Ent. News, Lancaster Pa. **61** 1950 pp. 171–177, 203.

2323.—**Rehn, J. W. H., Maldonado Capriles, J. & Henderson, J. M.** Field studies on the bionomics of *Anopheles albimanus*. Parts II and III : Diurnal resting places—progress report. J. nat. Malar. Soc., Columbia, S.C. **9** 1950 pp. 268–279. [Dipt.]

2324.—**Rehn, J. W. H., Henderson, J. M. & Serrano, J. M.** Field studies on the bionomics of *Anopheles albimanus*, Part I : Aestivation of immature stages—progress report. J. nat. Malar. Soc., Columbia, S.C. **9** 1950 pp. 176–180, 2 figs. [Dipt.]

2325.—**Reichensperger, A.** Pausidae. Explor. Parc nat. Albert, Miss. de Witte (1933–1935), Brussels 1950 fasc. 68 12 pp. 2 figs. [Col.]

2326.—**Reichensperger, A.** Paussinen des belgischen Congogebietes. VI. Teil. Rev. Zool. Bot. afr., Brussels **43** 1950 pp. 124–134, 6 figs. [Col.]

2327.—**Reid, J. A.** Some new records of Anopheline mosquitoes from the Malay Peninsula with remarks on geographical distribution. Bull. Raffles Mus., Singapore **21** 1950 pp. 48–58, 1 fig. [Dipt.]

2328.—**Reid, J. A. & Hodgkin, E. F.** The *Anopheles umbrosus* group (Diptera : Culicidae). Parts I–II. Trans. R. ent. Soc. London **101** 1950 pp. 281–334, 15 figs.

2329.—**Reinhard, H. J.** The *Phyllophaga* of Texas (Scarabaeidae, Coleoptera). J. Kansas ent. Soc., Manhattan **23** 1950 pp. 27–40, 41–51, 1 pl.

2330.—**Rempel, J. G.** A guide to the mosquito larvae of Western Canada. Canad. J. Res., Ottawa **28** (D) 1950 pp. 207–248, 43 figs. [Dipt.]

2331.—**Remy, P. A.** Présence de l'Anoploure *Haematopinus suis* L. sur la Potamochère malgache. Bull. Soc. ent. France, Paris **55** 1950 pp. 76–78.

2332.—**Renjhen, P. I.** On the morphology of the immature stages of *Dacus (Strumeta) cucurbitae* Coq. (the melon fruit fly) with notes on its biology. Indian J. Ent., New Delhi **11** (1949) 1950 pp. 83–100, 4 figs.

2333.—**Renkonen, O.** Zur Autökologie einiger *Stenus*-Arten im Lichte synökologischer Beobachtungen. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 475–480, 1 map. [Col.]

2334.—**Rensch, B.** Die Abhängigkeit der relativen Sexualdifferenz von der Körpergrösse. Bonn. zool. Beitr. **1** 1950 pp. 58–69, 3 figs.

Repass, R. P. see Bellamy & Repass.

2335.—**Reskovits, M.** Beitrag zur Kenntnis der Pyraliden-Fauna der Umgebung von Eger. [In Magyar with German summary.] Folia ent. hung., Budapest **7** 1942 pp. 102–105. [Lep.]

2336.—**Révy, D.** Beiträge zur Kenntnis der Käferfauna des Komitates Moson. 2. Mitteilung. Folia ent. hung., Budapest **8** 1943 pp. 47–56. [Col.]

2337.—**Révy, D. & Siroki, Z.** Beiträge zur Kenntnis der Käferfauna des Komitates Moson. I. Anthribidae, Curculionidae und Scolytidiae. Folia ent. hung., Budapest **7** 1942 pp. 73–83.

2338.—**Reymond, A.** Du Mouydir au Zemmour (notes de voyage et de biogéographie saharienne). C.R. Soc. Biogéogr., Paris **26** 1949 nos. 222–224 pp. 10–14.

2339.—**Reymond, A.** Notes éthologiques et de capture sur quelques Buprestides sahariens. Entomologiste, Paris **6** 1950 pp. 104–109. [Col.]

2340.—Reymond, A. Notes de captures et observations éthologiques sur quelques Cérambycides sahariens. *Longicornia*, Paris 1 1950 pp. 563-576, 2 figs.

2341.—Reyne, A. Faure's vloeistof als insluitmiddel voor microscopische preparaten van kleine insecten. *Ent. Ber.*, Amsterdam 13 1950 pp. 37-42.

Ribeiro see Carneiro Ribeiro.

Ricciardi, I. see Rachou, Ricciardi & Guedes.

2342.—Richard, G. L'innervation et les organes sensoriels de la patte du terme à cou jaune (*Calotermes flavicollis* F.). *Ann. Sci. nat.*, Paris (Zool.) (11) 12 1950 pp. 65-83, 12 figs. [Isopt.]

2343.—Richard, G. Régénération des pattes chez le terme à cou jaune (*Calotermes flavicollis* Fab.). *Feuille Nat.*, Paris (N.S.) 5 1950 pp. 13-16, 2 figs. [Isopt.]

2344.—Richards, A. G. & Korda, F. H. Studies on Arthropod cuticle. IV. An electron microscope survey of the intima of arthropod tracheae. *Ann. ent. Soc. Amer.*, Columbus 43 1950 pp. 49-71, 3 pls. 1 fig.

2345.—Richards, O. W. Hymenoptera Aculeata in Pembrokeshire. *Ent. mon. Mag.*, London 86 1950 pp. 79-80.

Richards, Mrs. O. W. see Norris, M. J.

Richards, W. R. see Hocking, Richards & Twinn.

2346.—Richter, W. Zur Verbreitung der Orthopteren in Südwestdeutschland. *Jh. Ver. vaterl. Naturk. Württemberg*, Stuttgart 102-105 (1946-1949) 1950 pp. 68-69.

2346A.—Ricker, W. E. Some evolutionary trends in Plecoptera. *Proc. Indiana Acad. Sci.* 59 (1949) 1950 pp. 197-209, 1 fig.

2347.—Riegel, G. T. A new genus and species of Daenusini (Hym.: Braconidae). *Ent. News*, Lancaster, Pa. 61 1950 pp. 125-129, 1 pl.

2348.—Riegel, G. T. Sex and the altitude of flight in *Cyclocephala* (Coleoptera: Scarabaeidae). *Trans. Illinois Acad. Sci.*, Springfield 41 1948 pp. 113-115.

2349.—Riherd, P. T. Biological notes on *Anagyrus antoninae* Timberlake (Hymenoptera—Encyrtidae) and its host *Antonina graminis* (Maskell) (Homoptera—Coccoidea). *Florida Ent.*, Gainesville 33 1950 pp. 18-22, 3 figs.

2350.—Riley, N. D. The Rothschild-Cockayne-Kettlewell collection of British Lepidoptera. *Entomologist*, London 83 1950 pp. 19-20.

2351.—Rindge, F. H. A revision of the Geometrid genus *Sericosema* (Lepidoptera). *Amer. Mus. Novit.*, New York no. 1468 1950 30 pp. 7 figs.

2352.—Rindge, F. H. A revision of the North American species of the genus *Syrrhodia* (Lepidoptera, Geometridae). *Amer. Mus. Novit.*, New York no. 1469 1950 26 pp. 6 figs.

2353.—Ringdahl, O. Dipterologiska antekningar från sydsvenska mossar. *Ent. Tidskr.*, Stockholm 71 1950 pp. 111-119.

2354.—Ringdahl, O. Dipterologische Notizen 7. Zwei für die schwedische Fauna neue *Melinia*-Arten (Muscidae). *Opusc. ent.*, Lund 15 1950 pp. 189-191, 3 figs.

Rioux, J. A. see Quézel, Verdier & Rioux; Verdier, Quézel & Rioux.

2355.—Risbec, J. Sur la ponte et le développement larvaire des insectes dans les cultures au Sénégal. *Agron. trop.*, Nogent-sur-Marne 5 1950 pp. 227-267, 10 figs.

2356.—Risbec, J. La pupe de *Diopsis apicalis* Dalm. (Dipt.). *Bull. Soc. ent. France*, Paris 55 1950 pp. 114-115, 5 figs.

2357.—Risbec, J. Sur une forme nouvelle d'*Hoplitoecoris* (Hemicocephalide) de la Vallée du Fleuve Sénégal. *C.R. 1er Conf. int. Africanistes Ouest*, Paris 1 1950 p. 298, 1 fig. [Hem.]

2358.—Risbec, J. Au sujet du complexe biologique des pontes de mantes. *C.R. 1er Conf. int. Africanistes Ouest*, Paris 1 1950 pp. 299-303, 4 figs. [Orth.]

2359.—Risbec, J. Note au sujet d'un Braconide phytophage. *C.R. 1er Conf. int. Africanistes Ouest*, Paris 1 1950 pp. 303-304, 2 figs. [Hym.]

2360.—Risbec, J. Importance systématique de l'étude des chrysaliides. C.R. 1er Conf. int. Africaniastes Ouest, Paris 1 1950 pp. 305-316.

2361.—Risbec, J. Etat actuel des recherches entomologiques agricoles dans la région correspondant au secteur soudanais de recherches agronomiques. C.R. 1er Conf. int. Africaniastes Ouest, Dakar & Paris 1 1950 pp. 317-375.

2362.—Risbec, J. Les Hispidae des plantes cultivées. Rev. int. Bot. appl., Paris 30 1950 pp. 378-396, 13 figs. [Col.]

2363.—Risbec, J. I. La faune entomologique des cultures au Sénégal et au Soudan français. II. Contribution à l'étude des Proctotrupidae. Trav. Lab. Ent. Sect. Soudan. Rech. agron., Gouv. gén. A.O.F. [Dakar] 1950 638 [+1] pp. 4 pls. 288 figs.

Ris Lambers see Hille Ris Lambers.

2364.—Risler, H. Kernvolumenänderungen in der Larvenentwicklung von *Ptychopoda seriata* Schrk. Biol. Zbl., Leipzig 69 1950 pp. 11-28, 15 figs. [Lep.]

2365.—Rivalier, E. A propos des taches de Cicindèles. Entomologiste, Paris 6 1950 pp. 99-104, 18 figs. [Col.]

2366.—Rivalier, E. Démembrement du genre *Cicindela* Linné. (Travail préliminaire limité à la faune paléarctique.) Rev. franç. Ent., Paris 17 1950 pp. 217-244, 11 figs. [Col.]

2367.—Rivalier, E. Rétablissement de *Cicindela maroccana* Fabricius dans sa qualité d'espèce. Rev. franç. Ent., Paris 17 1950 pp. 93-96, 2 figs. [Col.]

Rivers see La Rivers.

2368.—Rivnay, E. & Zimmermann-Gries, S. Dipterous leaf miners in Israel. [In Hebrew with English summary.] Ktavim, Rehovot 1 1950 pp. 71, 287-292.

2369.—Robert, D. Le Oplocampe del Susino. II. *Hoplocampa rutilicornis* Klug. Boll. Lab. Ent. agr. Portici 9 1948 pp. 8-26, 5 figs. [Hym.]

2370.—Roberts, E. W. Artificial feeding of *Culicoides nubeculosus* in the laboratory. Nature, London 166 1950 p. 700, 1 fig. [Dipt.]

2371.—Roberts, F. H. S. The tail-switch louse of cattle, *Haematopinus quadripertitus* Fahrenholz. Aust. vet. J., Sydney 26 1950 pp. 136-138. [Anopl.]

Roberts, W. C. see Crow & Roberts.

Robertson, F. W. see Begg and Robertson.

2372.—Robinson, G. G. A new species of *Aedes (Finlaya)* from northern Rhodesia. J. ent. Soc. Sthn Africa, Pretoria 13 1950 pp. 80-82, 1 fig.

2373.—Robinson, H. S. Prophylactic methods in the rearing of Lepidopterous larvae. Ent. Gaz., London 1 1950 pp. 139-141.

2374.—Robinson, H. S. & P. J. M. Some notes on the observed behaviour of Lepidoptera in flight in the vicinity of light-sources together with a description of a light-trap designed to take entomological samples. Ent. Gaz., London 1 1950 pp. 3-15, 12 figs.

Robinson, P. J. M. see Robinson, H. S. & P. J. M.

2375.—Rocca, L. Appunti critici su "Lepidoptera Pedemontana" di L. de Prunner. Boll. Soc. ent. ital., Genoa 80 1950 pp. 82-88.

2376.—Roche, P. J. L. Keys for the identification of the Nigerian Tabanidae. Lagos, Govt. Printer [1950] 16 pp., 1 fig. [Dipt.]

2377.—Rockstein, M. Longevity in the adult worker honeybee. Ann. ent. Soc. Amer., Columbus 43 1950 pp. 152-154. [Hym.]

2378.—Rockstein, M. Glycogen metabolism in insects: a review. Bull. Brooklyn ent. Soc., Lancaster, Pa. 45 1950 pp. 74-81.

Rodriguez Azagra, E. see Martin Sanz & Rodriguez Azagra.

2379.—Roeder, K. D. & Weiant, E. A. The electrical and mechanical events of neuro-muscular transmission in the cockroach, *Periplaneta americana* (L.). J. exp. Biol., London 27 1950 pp. 1-13, 1 pl. 4 figs. [Orth.]

2380.—**Roell, L.** Digne 1949. Z. Lepid., Krefeld **1** 1950 pp. 35–40.

2381.—**Roepke, W.** Aantekeningen over Synonymie. Ent. Ber., Amsterdam **13** 1950 pp. 25–28. [Lep.]

2382.—**Romeo, V.** Risultati dello studio dell'anofelismo nella provincia di Reggio Calabria. Riv. Malaria., Rome **29** 1950 pp. 149–168, 12 figs. [Dipt.]

Ronchetti, G. see Pavan & Ronchetti.

2383.—**Rosas Costa, J. A.** Catálogo de Protura (Insecta, Apterygota: Entotropha). Arthropoda, Buenos Aires **1** 1950 pp. 327–356.

2384.—**Rosický, B.** Biocenoses and ecology of the fleas of Central Europe. [In Czech with English summary.] Věstn. Čsl. zool. Společ., Prague **14** 1950 pp. 97–148. [Siphonapt.]

2385.—**Rosin, S. & Pfister, R.** Zur Technik der Fixierung von Insektenlarven. Rev. suisse Zool., Geneva **57** 1950 pp. 569–570.

2386.—**Ross, E. S.** Additional illustrations and notes on *Aedes bambusicolus* Knight and Rozeboom. J. Wash. Acad. Sci., Menasha **40** 1950 pp. 79–82, 2 figs. [Dipt.]

2387.—**Ross, E. S.** The role of the entomological museum. Pan-Pacif. Ent., San Francisco **26** 1950 pp. 1–10.

2388.—**Ross, E. S.** The Embiidae of India (Embioptera). Wasmann J. Biol., San Francisco **8** 1950 pp. 133–153, 6 figs.

2389.—**Ross, H. H.** Synoptic notes on some Nearctic Limnephilid caddisflies (Trichoptera, Limnephilidae). Amer. Midl. Nat., Notre Dame **43** 1950 pp. 410–429, 22 figs.

2390.—**Ross, H. H.** A new Philippine *Rhyacophila* of unusual interest (Trichoptera, Rhyacophilidae). Ent. News, Lancaster, Pa. **61** 1950 pp. 131–134, 1 pl.

2391.—**Ross, H. H.** New species of Nearctic *Rhyacophila* (Trichoptera, Rhyacophilidae). J. Wash. Acad. Sci., Baltimore **40** 1950 pp. 260–265, 11 figs.

2392.—**Ross, H. H. & DeLong, D. M.** New species of *Erythroneura* of the *maculata* group (Homoptera: Cicadellidae). Ohio J. Sci., Columbus **50** 1950 pp. 291–296, 10 figs.

2393.—**Ross, H. H. & Merkley, D. R.** The genus *Tinodes* in North America. J. Kansas ent. Soc., Manhattan **23** 1950 pp. 64–67, 1 pl. [Trichopt.]

Ross, H. H. see DeLong & Ross.

2394.—**Röszler, P.** Ameisen aus Siebenbürgen mit der Beschreibung ihrer Lebensweise. Zool. Anz., Leipzig **144** 1943 pp. 41–48. [Hym.]

2395.—**Röszler, P.** Die Ameisenwelt des Nagy Pietrosz, 2305 m (Ungarn) und Umgebung. Zool. Anz., Leipzig **145** 1950 pp. 210–225.

2396.—**Roth, L. M. & Willis, E. R.** The oviposition of *Dermestes ater* Degeer, with notes on bionomics under laboratory conditions. Amer. Midl. Nat., Notre Dame **44** 1950 pp. 427–447, 18 figs. [Col.]

Roth, L. M. see Willis & Roth.

2397.—**Rothfels, K. H.** Chromosome complement, polyploidy and supernumeraries in *Neopodismopsis abdominalis* (Acrididae). J. Morph., Philadelphia **87** 1950 pp. 287–315, 4 pls. 6 figs. [Orth.]

2398.—**Roubal, J.** Coleopterorum formae novae ex Bohemia descriptae. [In Czech and Latin.] Acta Soc. ent. Čsl., Prague **47** 1950 pp. 21–23.

2399.—**Roubal, J.** Historical and zoo-geographical essay about *Nepachys cardiaca* L. (Col. Malach.). [In Czech with English summary.] Acta Soc. ent. Čsl., Prague **47** 1950 pp. 149–154.

2400.—**Roubaud, E. & Ghelelovitch, S.** Observations sur plusieurs souches naturelles hybridées de *Culex autogène* (*C. autogenicus* Roub.). C.R. Acad. Sci., Paris **230** 1950 pp. 341–343. [Dipt.]

2401.—**Rougeot, P. C.** Description d'une nouvelle espèce de Saturniide du Gabon et de ses premiers états. Bull. Soc. linn. Lyon **19** 1950 pp. 224–227, 3 figs. [Lep.]

2402.—Royer, M. Catalogue des Hétéroptères (Insectes Hémiptères) du Massif de Fontainebleau et de la vallée du Loing. Trav. Ass. Nat. Loing fasc. 11 1948 pp. 136–155.

2403.—Rozeboom, L. E. & Komp, W. H. W. A review of the species of *Culex* of the subgenus *Melanocionion* (Diptera, Culicidae). Ann. ent. Soc. Amer., Columbus **43** 1950 pp. 75–114, 15 pls.

2404.—Rozeboom, L. E. & Komp, W. H. W. A new *Microculex elongatus*, from Colombia, with notes on the subgenus (Diptera, Culicidae). Proc. ent. Soc. Washington **52** 1950 pp. 147–157, 3 pls.

2405.—Rungs, C. Sur l'extension spontanée au Maroc du *Rhizobius (Lindorus) lophantae* Blaïsd. (Col. Coccinellidae). Bull. Soc. ent. France, Paris **55** 1950 pp. 9–11.

2406.—Rungs, C. Notes de lépidoptérologie marocaine (XVI): Descriptions et notes critiques. Bull. Soc. Sci. nat. Maroc, Rabat **28** (1948) 1950 pp. 142–166, 2 pls.

Rungs, C. see Gouguenheim, Perrier & Rungs.

Ruppel, R. F. see DeLong & Ruppel.

2407.—Ruter, G. Description d'un Cetoniide nouveau de Madagascar (Col. Scarab.). Nat. Malgache, Tana-narive **2** 1950 pp. 123–125, 4 figs.

2408.—Ryszka, H. Noch einmal *Pieris napi* ssp. *britannica* Vty. mod. *hibernica* Schmidt. Ent. NachrBl. öst. schweiz. Ent., Vienna **2** 1950 pp. 99–100. [Lep.]

2409.—Ryszka, H. Zwei Fälle von Heteromorphose bei *Zygaena*. Wien. ent. Rdsch., Vienna **2** 1950 pp. 32–34, 1 fig. [Lep.]

2410.—Ryszka, H. *Pieris napi* ssp. *britannica* Vty. (mod.) *hybernica* Schmidt. Wien. ent. Rdsch., Vienna **2** 1950 pp. 34–35, 1 pl. [Lep.]

2411.—Saalas, U. Suomen metsähyönteiset sekä muut metsällä vahingolliset ja hyödylliset eläimet. [In Finnish. The forest insects of Finland and other animals injurious and useful for the forest.] Helsinki, Werner Söderström Osakeyhtiö 1949 719 pp. 653 figs.

2412.—Saalas, U. *Agrilus angustulus* Ill. (Col., Buprestidae), ein für die finnische Fauna neuer Pracht-käfer. [In Finnish with German summary.] Ann. ent. fenn., Helsinki **16** 1950 pp. 110–112, 1 fig.

2413.—Saarinen, A. Tenthredinologische Mitteilungen. 3. Ann. ent. fenn., Helsinki **15** (1949) 1950 pp. 160–168. [Hym.]

2414.—Saarinen, A. Drei neue paläarktische *Trichiosoma*-Arten (Hym., Symphyta). Ann. ent. fenn., Helsinki **16** 1950 pp. 1–13, 12 figs.

2415.—Saarinen, A. *Amauronematus hartigi* n. sp., eine neue Blatt-wespenart (Hym., Symphyta) aus der Sammlung Th. Hartigs in München. Ann. ent. fenn., Helsinki **16** 1950 pp. 18–24, 6 figs.

2416.—Saarinen, A. Sechs neue Arten aus der Artengruppe *Amauro-nematus fallax* Lep. (Hym., Symphyta). Ann. ent. fenn., Helsinki **16** 1950 pp. 44–63, 24 figs.

2417.—Saarinen, A. A check-list of the sawflies of Eastern Fennoscandia. Ann. ent. fenn., Helsinki **16** 1950 pp. 71–83. [Hym.]

2418.—Sabrosky, C. W. A new species of *Pseudogaurax* from Florida (Diptera, Chloropidae). Bull. Brooklyn ent. Soc., Lancaster, Pa. **45** 1950 pp. 33–34, 1 fig.

2419.—Sabrosky, C. W. *Orygma luctuosa* in North America (Diptera, Coelopidae). Canad. Ent., Guelph **81** (1949) 1950 pp. 303–304.

2420.—Sabrosky, C. W. A synopsis of the Chloropid genera *Chaetochlorops* and *Eugaurax* (Diptera). J. Washington Acad. Sci. **40** 1950 pp. 185–188.

2421.—Sabrosky, C. W. Notes on Trichopodini (Diptera, Larvaevoridae), with a description of a new parasite of cotton stainers in Puerto Rico. J. Washington Acad. Sci. **40** 1950 pp. 361–371, 11 figs.

2422.—Sabrosky, C. W. A new species of *Eribolus* from California (Diptera, Chloropidae). Pan-Pacific. Ent., San Francisco **26** 1950 pp. 91–92.

2423.—**Sabrosky, C. W.** The genus *Dicraeus* in North America (Diptera, Chloropidae). Proc. ent. Soc. Washington **52** 1950 pp. 53–62, 1 pl.

2424.—**Sabrosky, C. W.** A new genus and two new species of, and miscellaneous notes on, African Acroceridae (Diptera). Proc. R. ent. Soc. London (B) **19** 1950 pp. 47–52, 2 figs.

Sacantanis, K. see Grison, Feron & Sacantanis.

2425.—**Saccà, G.** Stadii preimagoinali di *Phlebotomus perfiliewi* Parrot, *P. papatasi* Scop., *P. perniciosus* Newstead (Diptera, Psychodidae). Riv. Parassit., Rome **11** 1950 pp. 43–54, 6 figs.; also in R.C. Ist. sup. Sanità, Rome **13** 1950 pp. 680–688, 3 pls. 6 figs.

2426.—**Sacktor, B.** A comparison of the cytochrome oxidase activity of two strains of house flies. J. econ. Ent., Menasha **43** 1950 pp. 832–838, 4 figs. [Dipt.]

2427.—**Sailer, R. I.** Nest temperature of the common yellow jacket *Vespula arenaria* (F.). J. Kans. ent. Soc., Manhattan **23** 1950 pp. 134–137, 3 figs. [Hym.]

2428.—**Sailer, R. I.** *Alitocoris*, a new genus of Pentatomidae (Hemiptera). Proc. ent. Soc. Washington **52** 1950 pp. 69–75, 1 pl.

2429.—**Sailer, R. I.** A thermophobic insect. Science, Lancaster, Pa. **112** 1950 p. 743. [Plecopt.]

2430.—**Sakagami, S.** Zwei Schmarotzerhummel von den Kurilen-Inseln. Insecta matsum., Sapporo **17** 1950 p. 80. [Hym.]

2431.—**Sakimura, K.** Food preference of *Protaetia fusca* grubs. Proc. Hawaii. ent. Soc., Honolulu **14** (1949) 1950 pp. 173–174. [Col.]

2432.—**Sala de Castellarnau, P. I.** Notas entomológicas en plena madureza. Graellsia, Madrid **7** 1949 pp. 81–91, 4 figs. [Hym.]

2433.—**Salavation, M.** Quelques Buprestides de l'Iran. Ent. Phytopath. appl., Teheran no. 11 1950 pp. 6–11. [Col.]

2434.—**Salkeld, E. H.** Changes in the histology of the honey-bee ventriculus associated with the in-

gestion of certain insecticides. Nature, London **166** 1950 pp. 608–609, 4 figs. [Hym.]

2435.—**Sallee, R. M. & King, R. L.** An ant colony which moved over two hundred feet. Proc. Iowa Acad. Sci., Des Moines **54** 1947 pp. 349–352. [Hym.]

2436.—**Salmon, J. T.** A revision of the New Zealand wetas—Anostostomatinae (Orthoptera: Stenopelmatidae). Domin. Mus. Rec. Ent., Wellington **1** 1950 pp. 121–177, 66 figs.

2437.—**Salmon, J. T.** Notes on synonymy among New Zealand insects—I. Trans. roy. Soc. N.Z., Dunedin **78** 1950 pp. 1–2.

2438.—**Salmon, J. T.** A new species of Acrididae (Insecta: Orthoptera) from New Zealand. Trans. roy. Soc. N.Z., Dunedin **78** 1950 p. 69, 1 pl.

Salmon, J. T. see Drake & Salmon.

2439.—**Salt, R. W.** Time as a factor in the freezing of undercooled insects. Canad. J. Res., Ottawa **28D** 1950 pp. 285–291, 2 figs.

2440.—**Sanders, H.** Hymenoptera Aculeata III. Natuurh. Maandbl., Maastricht **39** 1950 pp. 47–48.

2441.—**Sanderson, M. W.** New North American *Phyllophaga* (Scarabaeidae). J. Kansas ent. Soc., Manhattan **23** 1950 pp. 90–93. [Col.]

2442.—**Sang, J. H.** Population growth in *Drosophila* cultures. Biol. Rev., Cambridge **25** 1950 pp. 188–219, 13 figs. [Dipt.]

Sang, J. H. see Begg & Sang.

2443.—**Sanpere, J. M.** Escarabeidos de Ifni y del Sáhara español. Eos, Madrid **26** 1950 pp. 271–297, 1 fldg. chart, 1 fig., 1 map.

Santiago, D. see Gapuz & Santiago.

Santis see De Santis.

Sanz see Martin Sanz.

2444.—**Sarà, M.** Sulla spermatogenesi di *Psychoda alternata* Say e di *Psychoda cinerea* Banks (Dipt. Psychodidae). Scientia Genet., Turin **3** 1950 pp. 236–246, 21 figs.

2445.—**Sardar Singh.** Behavior studies of honeybees in gathering nectar and pollen. Mem. Cornell agric. Exp. Sta., Ithaca no. 288 1950 57 pp. 13 figs. [Hym.]

Sarlet, H. see Florkin, Lozet & Sarlet.

2446.—**Sarlet, L.** Oeufs de Lycaenidae (pp. 19–20, 1 pl.), de Satyridae et de Nymphalidae (p. 60, 1 pl.). Lambillionea, Brussels **50** 1950. [Lep.]

2447.—**Sarlet, L.** Iconographie des oeufs de Lépidoptères (suite). Lambillionea, Brussels **50** 1950 pp. 29–33.

Sartory, P. K. see Wise, Ockenden & Sartory.

2448.—**Sasa, M.** Note on the blood-sucking lice (Anoplura) of rodents in Japan (Part I). J. exp. Med., Tokyo **20** 1950 pp. 715–717, 5 figs.

2449.—**Sasa, M., Kano, R. & Takahasi, H.** A revision of the adult Japanese mosquitoes of the genus *Aedes*, subgenus *Aedes*, with description of two new species. Jap. J. exp. Med., Tokyo **20** 1950 pp. 631–640, 7 figs. [Dipt.]

Šatava, J. see Peklo & Satava.

2450.—**Satchell, G. H.** On *Psychoda acutipennis* Tonnoir, a semi-apterous, island-living species. Proc. R. ent. Soc. London (B) **19** 1950 pp. 42–46, 1 fig.

2451.—**Satchell, G. H.** New species of Fijian Psychodidae (Diptera). Proc. R. ent. Soc. London (B) **19** 1950 pp. 176–185, 5 figs.

2452.—**Satchell, G. H.** The New Zealand Psychodidae: a study based upon the collection and manuscript notes of the late Dr. A. L. Tonnoir. Trans. R. ent. Soc. London **101** 1950 pp. 147–178, 23 figs. [Dipt.]

Satya Prakash Bhatnagar see Bhatnagar.

2453.—**Sawada, H.** On *Sericia similis* Lewis. [In Japanese.] Trans. Kansai ent. Soc., Nishinomiya **15** 1950 pp. 18–22, 8 figs. [Col.]

2454.—**Sawyer, F. E.** Egg-laying sites for olives-weirs and fly production. Salm. Trout Mag., London **128** 1950 pp. 16–23.

2455.—**Schachter, D.** Contribution à l'étude écologique de la Camargue. Le milieu aquatique et sa faune. Ann. Inst. océanogr., Paris **25** 1950 pp. 1–108, 14 figs.

2456.—**Schaerffenberg, B.** Zwei neue Elateriden-Larven der Ostalpen (*Paranomus costalis* Payk. und *Paranomus guttatus* Germ. Coleoptera Elateridae). Zool. Anz., Leipzig **143** 1943 pp. 246–248, 2 figs.

2457.—**Schaffner, J. C. & Jaques, H. E.** A preliminary list of the Haliphidae known to occur in Iowa. Proc. Iowa Acad. Sci., Des Moines **55** 1948 p. 435. [Col.]

2458.—**Schaffner, J. C. & Jaques, H. E.** A preliminary list of the Dytiscidae known to occur in Iowa. Proc. Iowa Acad. Sci., Des Moines **56** 1949 pp. 397–398. [Col.]

2459.—**Schaller, F.** Etude morphologique du complexe endocrine rétro-cérébral de la larve d'abeille (*Apis mellifica* L.). C.R. Soc. Biol., Paris **144** 1950 pp. 1097–1100, 5 figs.

2460.—**Schaller, F.** Nachtfalter hören Ultraschall. Natur u. Volk, Frankfurt a. M. **80** 1950 pp. 162–166, 3 figs. [Lep.]

2461.—**Schaller, F.** Zur Ökologie der Collembolen in Kalksteinboden (nebst einigen Bemerkungen über Proturen). Zool. Jb., Jena (Syst.) **78** 1949 pp. 263–293, 10 figs.

2462.—**Schaller, F.** *Notiophilus biguttatus* F. (Coleopt.) und *Japyx solifugus* Haliday (Diplur.) als spezielle Collembolenträuber. Zool. Jb., Jena (Syst.) **78** 1949 pp. 294–296, 3 figs.

2463.—**Schaller, F.** Biologische Beobachtungen an humusbildenden Bodentieren, insbesondere an Collembolen. Zool. Jb., Jena (Syst.) **78** 1950 pp. 506–525, 17 figs.

2464.—**Schaller, F. & Timm, C.** Ueber das Hörvermögen der Nachtfalter. Verh. dtsch. Zool. Mainz 1949, Leipzig 1950 pp. 216–219, 3 figs. [Lep.]

2465.—**Schaller, F. & Timm, C.** Das Hörvermögen der Nachtschmetterlinge. Z. vergl. Physiol., Berlin **32** 1950 pp. 468–481. [Lep.]

2466.—Schanderl, H. Ueber die Hefesymbiose der Cerambyciden und Aphiden. Verh. dtsch. Zool. Mainz 1949, Leipzig 1950 pp. 252–256, 4 figs. [Col., Hem.]

Schantz, M. v. see Bruun & Schantz.

2467.—Schedl, K. E. Fauna Indo-Malayensis.—II. Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 892–900. [Col.]

2468.—Schedl, K. E. Fauna aethiopica III. Bull. Inst. Sci. nat. Belg., Brussels **26** 1950 no. 50, 36 pp. [Col.]

2469.—Schedl, K. E. Neotropical Scolytoidea II. Dusenia, Curitiba **1** 1950 pp. 145–180. [Col.]

2470.—Schedl, K. E. Nomina conservanda of Scolytoidea I. Ent. Ber., Amsterdam **13** 1950 p. 96. [Col.]

2471.—Schedl, K. E. Bestimmungstabellen palaearktischer Borkenkäfer VI. Wien. ent. Rdsch. (pp. 35–38) (Ent. NachrBl. öst. Schweiz. Ent.), Vienna **2** 1950 pp. 35–38, 58–61, 81–84, 96–98. [Col.]

2472.—Schedl, K. E. Fauna madagascariensis. I. Mém. Inst. sci. Madagascar, Tananarive **4A** 1950 pp. 105–111, 2 figs. [Col.]

2473.—Schedl, K. E. Bestimmungstabellen der paläarktischen Borkenkäfer. Mitt. forstl. Bundes-Versuchs. Mariabrunn, Vienna **46** 1950 pp. 67–88. [Col.]

2474.—Schedl, K. E. Fauna fijiana (Scolytoidea). Occ. Pap. Bishop Mus., Honolulu **20** 1950 pp. 35–54. [Col.]

2475.—Schedl, K. E. Fauna aethiopica IV. Rev. franç. Ent., Paris **17** 1950 pp. 210–216. [Col.]

2476.—Schedl, K. E. 93. Beitrag zur Morphologie und Systematik der Scolytoidea. Rev. Zool. Bot. afr., Brussels **43** 1950 pp. 203–210. [Col.]

2477.—Scheerpeltz, O. Die paläarktischen Arten der Gattung *Ancyrophorus* Kr. (Col. Staphylinidae). Norsk ent. Tidsskr., Oslo **8** 1950 pp. 53–76, 3 figs.

2478.—Scheerpeltz, O. Eine neue Art der Gattung *Trogophloeus* Manerh. aus Nord-Norwegen (Col. Staphylinidae). Norsk ent. Tidsskr., Oslo **8** 1950 pp. 77–81, 6 figs.

2479.—Scheerpeltz, O. Eine neue *Atheta* aus dem Gebiete des Dachsteines (Col. Staphylinidae). Wien. ent. Rdsch., Vienna **2** 1950 pp. 1–5, 2 figs.

2480.—Schein, H. Neue Cetoniden (Col.). Ent. Arb., München **1** 1950 pp. 273–276.

2481.—Schiavi, A. & Franco, A. C. Nova técnica para repasto sanguineo dos mosquitos. Arq. Hig. Saúde públ., São Paulo **14** 1950 pp. 57–59. [Dipt.]

2482.—Schilder, F. A. Probleme und Methoden der Biostatistik. I–III, VII. Biol. Zbl., Leipzig **66** 1947 pp. 186–197, 201–210, 401–416; **69** 1950 pp. 63–71.

2483.—Schildmacher, H. Darmkanal und Verdauung bei Stechmückenlarven. Biol. Zbl., Leipzig **69** 1950 pp. 390–438, 8 figs. [Dipt.]

2484.—Schildmacher, H. Ueber Photosensibilisierung von Stechmückenlarven durch fluoreszierende Farbstoffe. Biol. Zbl., Leipzig **69** 1950 pp. 468–477. [Dipt.]

2485.—Schindler, J. Reservestoff- und Exkretspeicherung bei Bodentieren, unter besonderer Berücksichtigung der Harnsäureverbindungen. Oesterr. Zool. Z., Vienna **2** 1950 pp. 517–567, 8 figs.

2486.—Schmid, F. Un trichoptère sudaméricain des hautes altitudes. Acta zool. lilloana, Tucuman **8** 1949 pp. 591–601, 9 figs.

2487.—Schmid, F. L'armature céphalique de *Cerasma cornuta* McLachlan (Trichoptera Sericostomatidae). Bull. Inst. Sci. nat. Belg., Brussels **26** 1950 no. 16, 4 pp., 5 figs.

2488.—Schmid, F. Trois nouveaux Limnophilides (Trichopt.). Mitt. schweiz. ent. Ges., Berne **23** 1950 pp. 47–54, 16 figs.

2489.—Schmid, F. Le genre *Halesochila* Banks (Trichopt. Limnophilid.). Mitt. schweiz. ent. Ges., Berne **23** 1950 pp. 55–60, 10 figs.

- 2490.—Schmid, F. Le genre *Hydatophylax* Wall. (Trichopt. Limnophilidae). Mitt. schweiz. ent. Ges., Berne **23** 1950 pp. 265–296, 75 figs.
- 2491.—Schmid, F. Monographie du genre *Grammotaulius* Kolenati (Trichoptera Limnophilidae). Rev. suisse Zool., Geneva **57** 1950 pp. 317–352, 71 figs.
- 2492.—Schmid, F. Le genre *Anabolia* Steph. (Trichoptera, Limnophilidae). Schweiz. Z. Hydrobiol., Zürich **12** 1950 pp. 300–339, 119 figs.
- 2493.—Schmid, W. Analyse der letalen Wirkung des Faktors *lme* (letal-meander) von *Drosophila melanogaster*. Z. indukt. Abstamm.-u. VererbLehre, Berlin **83** 1949 pp. 220–253, 12 figs. [Dipt.]
- 2494.—Schmidt, E. Ueber das letzte Larvenstadium einiger europäischer Aeschniden (Odonata). Opusc. ent., Lund **15** 1950 pp. 193–201, 6 figs.
- 2495.—Schmidt, H. Die Flagellatensymbiose der holzfressenden Termiten. Verh. dtsch. Zool. Kiel 1948, 1949 pp. 344–350, 2 figs. [Isopt.]
- 2496.—Schmidt, H. Studien an darmbewohnenden Flagellaten der Termiten. I. Mitteilung. *Joenia annectens* Grassi in *Calotermes flavigollis* Fabr. Z. Parasitenk., Berlin **14** 1950 pp. 535–544, 8 figs. [Isopt.]
- 2497.—Schmidt, W. J. Neuere polarisationsoptische Arbeiten auf dem Gebiete der Biologie. III. Bericht. Protoplasma, Berlin **37** 1942 pp. 86–153.
- 2498.—Schmidt, W. J. Bemerkungen über den blauen Chitinfarbstoff in den Schuppen des Nymphalide *Nessaea obrinus* L. Zool. Anz., Leipzig **136** 1941 pp. 70–72. [Lep.]
- 2499.—Schmitz, H. Formicidae quaedam a cl. A. Stärcke determiniae, quas in Lusitania collegit. Brotéria, Lisbon (Cl. nat.) **46** 1950 pp. 12–16. [Hym.]
- 2500.—Schmitz, H. Neue Phoriden aus Europa und Afrika (Diptera, Phoridae). Brotéria, Lisbon (Cl. nat.) **19** 1950 pp. 107–115, 9 figs.
- 2501.—Schmitz, H. Welke Metopina-soort schuilt onder *Drepanophora braueri* Strobl 1880? (Diptera, Phoridae). Ent. Ber., Amsterdam **13** 1950 pp. 106–107.
- 2502.—Schmitz, H. *Chonocephalus elongatus* n. sp. (Diptera, Phoridae). Natuurh. Maandbl., Maastricht **39** 1950 pp. 21–24, 3 figs.
- 2503.—Schmitz, H. Ueber die Gattung *Thaumatoxena*, nebst Beschreibung einer neuen Art aus dem Uelle-Gebiet (Phoridae, Diptera). Rev. Zool. Bot. afr., Brussels **43** 1950 pp. 39–58, 5 figs.
- 2504.—Schmitz, H. Additional data on *Phora coangustata* Schmitz (Diptera : Phoridae). Wasmann J. Biol., San Francisco **8** 1950 pp. 89–92, 3 figs.
- 2505.—Schnaider, J. Formes de Lépidoptères nouvelles ou plus rares. [In Polish with French summary and descriptions.] Polsk. Pismo ent., Wrocław **19** (1949) 1950 pp. 237–255, 3 figs.
- 2506.—Schneider, F. Die Entwicklung des Syrphidenparasiten *Diplazon fissorius* Grav. (Hym. Ichneum.) in uni-, oligo- und polyvoltinen Wirten und sein Verhalten bei parasitärer Aktivierung der Diapauselarven durch *Diplazon pectoratorius* Grav. Mitt. schweiz. ent. Ges., Berne **23** 1950 pp. 155–194, 12 figs.
- 2507.—Schneider, F. Die Abwehrreaktion des Insektenblutes und ihre Beeinflussung durch die Parasiten. Vjschr. naturf. Ges. Zürich **95** 1950 pp. 22–44, 9 figs.
- 2508.—Schneider, W. Ueber den Erschütterungssinn von Käfern und Fliegen. Z. vergl. Physiol., Berlin **32** 1950 pp. 287–302, 6 figs. [Col., Dipt.]
- 2509.—Schneider-Orelli, O. Das Problem des Blatthonigs. Beih. schweiz. Bienen-Ztg., Aarau Heft 19 [?1950] pp. 471–484, 4 figs. [Hem.]
- 2510.—Schneirla, T. C. Problems in the environmental adaptation of some New-World species of Doryline ants. An. Inst. Biol., Mexico **20** (1949) 1950 pp. 271–384, 2 figs. [Hym.]

- 2511.**—**Schneirla, T. C. & Brown, R. Z.** Army-ant life and behavior under dry-season conditions. 4. Further investigation of cyclic processes in behavioral and reproductive functions. Bull. Amer. Mus. nat. Hist., New York **95** 1950 pp. 263-354, 1 pl. 8 figs.
- 2512.**—**Schöne, H.** Die Augen als Gleichgewichtsorgane bei Wasserläuferlarven. Naturwissenschaften, Berlin **37** 1950 pp. 235-236, 2 figs. [Col.]
- 2513.**—**Schöne, H.** Zur Funktion der optischen Ganglien der *Dytiscus*-larve. Naturwissenschaften, Berlin **37** 1950 p. 527, 1 fig. [Col.]
- 2514.**—**Schöne, H.** Die Regulation der Fehlbewegungen einseitig gebündelter *Dytiscus*-larven. Z. Naturf., Tübingen **5b** 1950 pp. 383-386. [Col.]
- 2515.**—**Schreiber, G. & Pellegrino, J.** Eteropicnosi di autosomi come possibile meccanismo di speciazione. (Ricerche citologiche su alcuni Emitteri neotropici.) Scientia Genet., Turin **3** 1950 pp. 215-226, 11 figs.
- 2516.**—**Schremmer, F.** Bau und Funktion der Larvenmundteile der Dipterengattung *Dixa* Meigen. Oesterr. Zool. Z., Vienna **2** 1950 pp. 379-413, 12 figs.
- 2517.**—**Schremmer, F.** Zur Morphologie und funktionellen Anatomie des Larvenkopfes von *Chaoborus* (*Corethra* auct.) *obscuripes* v.d. Wulp (Dipt. Chaoboridae). Oesterr. Zool. Z., Vienna **2** 1950 pp. 471-516, 17 figs.
- Schrödter, H.** see Eichler & Schrödter.
- 2518.**—**Schubart, O.** Ameisen und Diplopoden in ihren gegenseitigen Beziehungen. Rev. Ent., Rio de Janeiro **21** 1950 pp. 615-622. [Hym.]
- Schubert, G.** see Dittrich, Höhne, Paul & Schubert; Paul & Schubert.
- 2519.**—**Schulze, P.** Naturfund der "tetraptera"-Form bei einer Mücke. Zool. Anz., Leipzig **144** 1943 pp. 33-34, 3 figs.; **145** 1944 p. 204. [Dipt.]
- 2520.**—**Schurr-Michel, E.** Eine Bostrichide, *Stephanopachys substriatus* Payk. als Gerbrindenschädling.
- Z. angew. Ent., Berlin **32** 1950 pp. 285-288, 6 figs. [Col.]
- 2521.**—**Schuster, R. M.** Notes on the Pseudophotopsidinae (Mutilidae) with description of the female sex. J. New York ent. Soc. **58** 1950 pp. 192-197, 1 pl. [Hym.]
- 2522.**—**Schuurmans Stekhoven, jr., J. H.** Die Ausbeute an Pupiparen einer Reise von Dr. P. Wagenaar Hummelinck nach den Inseln Unter den Wind (Westindien). Zool. Anz., Leipzig **136** 1941 pp. 79-80. [Dipt.]
- 2523.**—**Schwarz, H. F.** The stingless bees (Meliponidae) of Mexico. An. Inst. Biol., Mexico **20** (1949) 1950 pp. 357-370, 1 fig. [Hym.]
- 2524.**—**Schwarz, R.** Sur la polyphagie de *Coleophora onopordiella* Z. (Lepid. Entomol. aplie.). [In Czech with French summary.] Acta Soc. ent. Čsl., Prague **47** 1950 pp. 177-186, 2 figs.
- 2525.**—**Schweiger, H.** *Ptomaphagus (Adelops) carolinensis* n. sp. (Col. Silph.) eine neue Catopide aus den östlichen Vereinigten Staaten. Ark. Zool., Stockholm **42B** 1950 no. 1 pp. 1-2, 2 figs.
- 2526.**—**Schweiger, H.** Zur Kenntnis der Käferfauna einiger niederösterreichischer und steirischer Höhlen. Ent. Bl., Krefeld **45-46** (1949-1950) 1950 pp. 30-34, 3 figs.
- 2527.**—**Schweiger, H.** Die thermophile Fauna Sudkärntens. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 481-488.
- 2528.**—**Schweiger, H.** Der Einfluss der Eiszeit auf die Verbreitung der ostalpinen *Trechus*-arten. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 489-496, 5 maps, 5 figs. [Col.]
- 2529.**—**Scoggin, J. K. & Tauber, O. E.** Survey of literature on insect lipids. Iowa St. Coll. J. Sci., Ames **25** 1950 pp. 99-124.
- Seale, J. K.** see Martin & Seale.
- 2530.**—**Séguy, E.** Un nouveau *Phytomyza* parasite des oeillets cultivés (Dipt. Agromyzidae). Ann. Mus. Stor. nat., Genova **64** 1950 pp. 56-61, 1 fig.

- 2531.—Séguy, E. Un Muscide nouveau pour la faune française (Dipt.). Bull. Soc. ent. France, Paris **55** 1950 pp. 120–121, 1 fig.
- 2532.—Séguy, E. La biologie des Diptères. Encycl. ent., Paris (A) **26** 1950 609 pp. 10 pls. (7 col.) 225 figs.
- 2533.—Séguy, E. Contribution à l'étude de l'Air. Diptères. Mém. Inst. franç. Afr. noire, Paris no. 10 1950 pp. 272–282.
- 2534.—Séguy, E. Un nouveau genre de Corynétine du Midi de la France (Dipt. Empididae). Vie et Milieu, Paris **1** 1950 pp. 83–87, 4 figs.
- Sehgal, B. R. *see* Khanna, Nigam, Sehgal & Bandyspadhyay.
- 2535.—Seidenstücker, G. Ueber *Myrmedobia* Färensprung (Heteropt. Microphysidae). Senckenbergiana, Frankfurt a. M. **31** 1950 pp. 287–296, 14 figs.
- 2536.—Seiler, J. Resultate aus einer Artkreuzung zwischen *Solenobia triquetrella* F.R. X *Solenobia fumosella* H. (Lepid. Psychidae) mit Intersexualität in F_1 . Arch. Klaus-Stift. Vererb-Forsch. Zürich **24** 1949 pp. 124–154, 1 pl. 15 figs.
- 2537.—Seiler, J. L'intersexualité chez les Lépidoptères. C.R. 13e Congr. int. Zool. Paris 1948, 1949 pp. 155–161.
- 2538.—Seiler, J. & Gessner, B. Die automiktischen Vorgänge im Ei der tetraploid parthenogenetischen *Solenobia triquetrella* F.R. (Psychidae, Lepid.). Chromosoma, Berlin **4** 1950 pp. 91–107, 8 figs.
- 2539.—Sellier, R. La différenciation sexuelle des élytres chez les Orthoptères Gryllidés. C.R. Acad. Sci., Paris **231** 1950 pp. 180–182.
- 2540.—Sellier, R. Sur le retournement des ptérothèques chez les Orthoptères Gryllides. C.R. Acad. Sci., Paris **231** 1950 pp. 923–924.
- 2541.—Sen, P. Diagnostic characters for the differentiation of the larvae of *A. subpictus* and *A. sundanicus*. Indian J. Malariol., Calcutta **3** (1949) 1950 pp. 265–268. [Dipt.]
- 2542.—Sengün, A. Vergleichend-ontogenetische Untersuchungen über die Riesenchromosomen verschiedener Gewebearten der Chironomiden I. Comm. Fac. Sci. Univ. Ankara, Istanbul **1** 1948 pp. 187–248, 26 figs. [Dipt.]
- Serra *see* Pinto Serra.
- Serrano, J. M. *see* Rehn, Henderson & Serrano.
- 2543.—Seshagiri Rao, D. A simple type of insect olfactometer. Indian J. Ent., New Delhi **11** (1949) 1950 pp. 71–75, 1 fig.
- 2544.—Sebastopulo, D. G. The genetics of East African Lepidoptera. II. Entomologist, London **33** 1950 pp. 256–258.
- 2545.—Severin, H. H. P. *Texananus incurvatus*. III. Life history on virus-infected and on healthy plants. Hilgardia, Berkeley **19** 1950 pp. 546–548. [Hem.]
- 2546.—Severin, H. H. P. & Klostermeyer, E. C. *Colladonus geminatus* and *C. montanus*. Life histories on virus-infected and on healthy plants. Hilgardia, Berkeley **19** 1950 pp. 553–560. [Hem.]
- Severin, H. H. P. *see* DeLong & Severin.
- Sgourakis, E. *see* Baker & Sgourakis.
- 2547.—[Shakhbazov, V. G.] The Ussurian oak silkworm in the Maritime Province. [In Russian.] Dokl. vsesoyuzn. Akad. sel'skokhoz. Nauk Lenina, Moscow 1950 no. 1 pp. 36–40, 2 figs. [Lep.]
- Shapiro, J. E. *see* Tulloch & Shapiro.
- 2548.—Shaw, F. A new Brazilian *Leia* (Diptera Mycetophilidae). Rev. brasil. Biol., Rio de Janeiro **10** 1950 pp. 113–114, 1 fig.
- 2549.—Shaw, F. & Lane, J. Key for Neotropical *Leia* Meigen, 1818 (Diptera, Mycetophilidae). Rev. brasil. Biol., Rio de Janeiro **10** 1950 pp. 253–256.
- 2550.—Shaw, F. R. & M. M. *Sciara (Neosciara) beebei*, a new species of Sciaridae having migratory larvae. Bull. Brooklyn ent. Soc. **45** 1950 pp. 14–16, 2 figs. [Dipt.]
- Shaw, J. *see* Beadle & Shaw.
- Shel'deshova, G. G. *see* Danilevskii & Shel'deshova.

2551.—Shewell, G. E. A new species of *Sarcophaga* reared from the Columbian ground squirrel (Diptera : Sarcophagidae). Canad. Ent., Guelph **82** 1950 pp. 245–246, 2 figs.

2552.—Shillito, J. F. A note on Speiser's genus *Centrioncus* and a revised definition of Diopsidae (Diptera : Acalyptratae). Proc. R. ent. Soc. London (B) **19** 1950 pp. 109–113, 2 figs.

2553.—Shirahata, K. Cicindelidae (Col.) of Shansi China. [In Japanese.] Trans. Kansai ent. Soc., Nishinomiya **15** 1950 pt. 2 pp. 28–32.

2554.—Shirōzu, T. Note on some early records and the identification of the Japanese subspecies of *Zizina otis* Fabricius (Lepidoptera : Lycaenidae). [In Japanese.] Ent. Rev. Japan, Osaka **5** 1950 pp. 22–26.

2555.—Shively, A. W. Role of the insect larva in plant gall production. Proc. Penn. Acad. Sci., Harrisburg **24** 1950 pp. 17–20, 1 pl.

[Shtakel'berg, A. A.] see Pavlovskii & Vinogradov.

2556.—[Shtenberg, D. M.] Possibilities of the development of the wings of butterflies by transplanting their rudiments into the body cavity. [In Russian.] C.R. Acad. Sci. URSS, Moscow (N.S.) **71** 1950 pp. 1159–1162.

2557.—[Shtenberg, D. M.] A comparative valuation of the regenerative possibilities in insects. [In Russian.] Zool. Zh., Moscow **29** 1950 pp. 267–276.

2558.—[Shumakov, E. M. & Yakhimovich, L. A.] Peculiarities of the embryonic development of the Asiatic locust (*Locusta migratoria* L.) under certain conditions of the external environment. [In Russian.] Zool. Zh., Moscow **29** 1950 pp. 327–340, 5 figs. [Orth.]

Sikes, R. K. see Chamberlain & Sikes.

Silva, C. R. see Noé & Silva.

2559.—Silva, P. Espécies do gênero *Stenoma* (Lepidoptera) e suas plantas hospedeiras na região neotropical. Bol. Secret. Agric. Industr. Com., Pernambuco **17** 1950 pp. 9–15, 1 map.

2560.—Silva Cruz, M. A. da & Gonçalves, T. Lepidópteros da Península ibérica reunidos por Cândido Mendes. Brotéria, Lisbon (Ci. nat.) **46** 1950 pp. 17–45, 49–56.

2561.—[Simić, Ch.] Contribution to the knowledge of the Phlebotominae of Jugoslavia. Part IV. Two Phlebotominae from the group *minutus* in Jugoslavia. [In Serbian.] Glas srpske Akad. Nauka, Odel. med. Nauka, Belgrade **197** 1950 pp. 75–83. [Dipt.]

2562.—[Simić, Ch., Gvozdenović, M. & Kostić, D.] Contribution to the knowledge of the Phlebotominae of Jugoslavia. Part II.—Fauna of the Phlebotominae of Montenegro. [In Serbian.] Glas srpske Akad. Nauka, Odel. med. Nauka, Belgrade **197** 1950 pp. 27–31. [Dipt.]

2563.—[Simić, Ch., Nežić, E. & Tartal'a, P.] Contribution to the knowledge of the Phlebotominae of Jugoslavia. Part III. Fauna of the Phlebotominae of Dalmatia. [In Serbian.] Glas srpske Akad. Nauka, Odel. med. Nauka, Belgrade **197** 1950 pp. 33–38. [Dipt.]

2564.—[Simić, Ch. & Zhivković, V.] Contribution to the knowledge of the fauna of our Phlebotominae. Part I. [In Serbian.] Glas srpske Akad. Nauka, Odel. med. Nauka, Belgrade **194** 1949 pp. 151–181.

2565.—Simmonds, F. J. Insects attacking *Cordia macrostachya* (Jacq.) Roem. and Schult. in the West Indies. II. *Schematiza cordiae* Barb. (Coleoptera, Galerucidae). Canad. Ent., Guelph **81** (1949) 1950 pp. 275–282, 5 figs.

2566.—[Simonov, I. S.] Technological properties of new breeds of the mulberry silkworm. [In Russian.] Dokl. vsesoyuzn. Akad. sel'skokhoz. Nauk Im. Lenina, Moscow **15** no. 12 1950 pp. 42–47. [Lep.]

Sinclair, W. K. see Bateman & Sinclair.

2567.—Singer, K. Bestimmungsschlüssel für die deutschen *Scolopostethus* Arten (Hemipt. Heteropt.). Mitt. Sammelst. Schmarotzerbestim., Aschaffenburg Heft 27 1950 pp. 3–4.

Singh see Karam Singh; Sardar Singh.

2568.—**Sinoda**, O. On Japanese species of *Phlebotomus*. Trans. Kansai ent. Soc., Nishinomiya **15** 1950 pt. 2 pp. 12–16, 3 figs. [Dipt.]

Siroki, Z. see Révy & Siroki.

Sitaraman, N. L. see Aziz & Sitaraman.

2569.—[**Sit'ko**, P. O.] The effectiveness of heterospermic fertilisation of the oak silkworm. [In Russian.] Dokl. vsesoyuzn. Akad. sel'skokhoz. Nauk Im. Lenina, Moscow **15** 1950 pt. 10 pp. 39–41. [Lep.]

2570.—**Sjöberg**, O. Drei neue Käfer aus der borealen Region Schwedens. Ent. Tidskr., Stockholm **71** 1950 pp. 159–164, 3 figs. [Col.]

2571.—**Sjöholm**, E. Till kändedom om Jakobstadstrakten's macrolepidopterfauna. Notul. ent., Helsingfors **29** (1949) 1950 pp. 64–79, 1 map.

2572.—**Skaife**, S. H. Some South African solitary bees. S. Afr. J. Sci., Johannesburg **46** 1950 pp. 183–187, 2 figs. [Hym.]

2573.—**Skala**, H. Zur Lepidopterenfauna Mährens und Schlesiens. Arb. ent. Abt. Landesmus. Brünn no. 3 1936 [1+] 197 pp. 1 map, 1 fig.

2574.—**Skala**, H. Ueber Sackminer. Z. wien. ent. Ges., Vienna **35** 1950 pp. 111–114, 2 pls. [Lep.]

2575.—**Skala**, H. Ueber minierende Gelechiidae. Z. wien. ent. Ges., Vienna **35** 1950 pp. 115–116, 1 pl. [Lep.]

2576.—**Slabý**, O. *Erebia medusa* Fabr. from Eastern Slovakia (Lep. Satyr.). [In Czech with English summary.] Acta Soc. ent. Čsl., Prague **47** 1950 pp. 48–52.

2577.—**Slabý**, O. The copulatory organs of a gynandromorphous *Argynnis paphia* L. and discussion about its development (Lep. Rhop.). [In Czech with English summary.] Acta Soc. ent. Čsl., Prague **47** 1950 pp. 81–95, 19 figs.

2578.—**Slater**, J. A. An investigation of the female genitalia as taxonomic characters in the Miridae (Hemiptera). Iowa St. Coll. J. Sci., Ames **25** 1950 pp. 1–81, 7 pls.

2579.—**Slifer**, E. H. Vulnerable areas on the surface of the tarsus and pretarsus of the grasshopper (Acrididae, Orthoptera); with special reference to the arolium. Ann. ent. Soc. Amer., Columbus **43** 1950 pp. 173–188, 17 figs.

2580.—**Slifer**, E. H. A microscopical study of the hydropyle and hydropyle cells in the developing egg of the grasshopper, *Melanoplus differentialis*. J. Morph., Philadelphia **87** 1950 pp. 239–273, 10 pls. [Orth.]

2581.—**Slípka**, J. Species of the family Limnobiidae new for Czechoslovakia (Dipt.). [In Czech with English summary.] Acta Soc. ent. Čsl., Prague **47** 1950 pp. 62–64, 3 figs.

2582.—**Slípka**, J. The structure of the compound eyes of imago of the genus *Tipula* L. (Dipt.). [In Czech with English summary.] Acta Soc. ent. Čsl., Prague **47** 1950 pp. 96–109, 3 figs.

2583.—**Slizynski**, B. M. Partial breakage of salivary gland chromosomes. Genetics, Menasha **35** 1950 pp. 279–287, 3 figs. [Dipt.]

2584.—**Slizynski**, B. M. *Chironomus* versus *Drosophila*. J. Genet., London **50** 1950 pp. 77–78, 1 pl. [Dipt.]

Šmelhaus, J. see Paclt & Šmelhaus.

Smelik, P. G. see Bennema & Smelik.

2585.—**Smetana**, A. Inventa Coleopterorum minus frequentium in Bohemia. [In Czech.] Acta Soc. ent. Čsl., Prague **47** 1950 pp. 57–58.

2586.—[**Smirnov**, E. S. & **Keleini-kova**, S. I.] Changes in the viability in *Neomyzus circumflexus* Buckt. (Aphidiidae) and the inheritance by it of acquired characters. [In Russian.] Zool. Zh., Moscow **29** 1950 pp. 52–68, 7 figs. [Hem.]

2587.—**Smit**, F. G. A. M. Siphonaptera neerlandica faunae nova species II, III. Ent. Ber., Amsterdam **13** 1950 pp. 63–64, 3 figs., 137–141, 4 figs.

2588.—**Smith**, K. G. V. The puparium of *Clusia flava* Mg. (Dipt., Clusiidae). Ent. mon. Mag., London **86** 1950 p. 53, 1 fig.

2589.—Smith, M. R. On the status of *Leptothorax* Mayr and some of its subgenera. *Psyche*, Cambridge, Mass. **57** 1950 pp. 29–30. [Hym.]

Smith, R. A. see Doutt & Smith.

2590.—Smith, R. C. & Dean, G. A. The eighteenth or 1948 annual insect population summary of Kansas. *J. Kansas ent. Soc., Manhattan* **23** 1950 pp. 1–16.

2591.—Smith, R. F. & Michelbacher, A. E. The development and behavior of populations of *Diabrotica 11-punctata* in foothill areas of California. *Ann. ent. Soc. Amer., Columbus* **42** (1949) 1950 pp. 497–510, 8 figs. [Col.]

2592.—Smith, R. W. & Finlayson, T. U. Larvae of Dipterous parasites of nymphal and adult grasshoppers. *Canad. J. Res., Ottawa (D)* **28** 1950 pp. 81–117, 51 figs.

2593.—Smith, S. G. The cytotaxonomy of Coleoptera. *Canad. Ent., Guelph* **82** 1950 pp. 58–68, 20 figs.

2594.—Smith, S. G. The butterflies and moths found in the County of Montgomeryshire. *Proc. Chester Soc. nat. Sci.* **3** 1950 pp. 5–68, 8 pls. [Lep.]

2595.—Smith-White, S. A note on reciprocal fertility in matings between subspecies of mosquitoes. *Proc. Linn. Soc. New South Wales, Sydney* **75** 1950 pp. 279–281. [Dipt.]

2596.—Smreczyński, S. Remarques sur les Curculionidae (Coleoptera) de Pologne et de pays voisins. [In Polish with French summary.] *Polsk. Pismo ent., Wrocław* **19** (1949) 1950 pp. 149–173.

2597.—Snodgrass, R. E. Comparative studies on the jaws of mandibulate arthropods. *Smithson. misc. Coll., Washington* **116** 1950 pp. 1–85, 25 figs.

2598.—Snyder, T. E. The fossil termites of the United States and their living relatives (Isoptera). *Proc. ent. Soc. Washington* **52** 1950 pp. 190–193.

2599.—Sobels, F. H. Experimentell erzeugte Nachkommenschaft von letalen Ovarien der Mutante *letal-*

translucidia (*ltr*) von *Drosophila melanogaster*. *Experientia*, Basle **6** 1950 pp. 139–140, 1 fig. [Dipt.]

2600.—Sogame, C. Several investigations on the times of moulting in *Euconocephalus pallidus* (Redtenbacher) (Orthoptera: Locustidae). *Trans. Shikoku ent. Soc.* **1** 1950 pp. 33–37.

2601.—Solari, F. I *Pachycerus europei* ed un nuovo genere di Cleonini (Col. Curc.). *Boll. Soc. ent. ital., Genoa* **80** 1950 pp. 50–54, 2 figs.

2602.—Solari, F. Curculionidi nuovi o poco conosciuti della fauna paleartica (Col. Curc.). XV Sinonimie e nuove specie. *Mem. Soc. ent. ital., Genova* **29** 1950 pp. 28–51.

2603.—[Solodovnikov, V. B.] Changes in the behaviour of the larvae of the Chinese oak silkworm (*Antheraea pernyi*) depending on food gradient. [In Russian.] *C.R. Acad. Sci. URSS, Moscow (N.S.)* **60** 1948 pp. 321–324, 1 fig. [Lep.]

2604.—[Solodovnikova, O. I.] The cycle of development of the fat body and its connection with the fertility in mosquitoes *Anopheles maculipennis sacharovi*, *A. superpictus* and *A. hyrcanus*. [In Russian.] *Zool. Zh., Moscow* **29** 1950 pp. 545–555. [Dipt.]

2605.—Someren, E. C. C. van. Ethiopian Culicidae. *Proc. R. ent. Soc. London (B)* **19** 1950 pp. 7–10, 39–41, 2 figs., 65–66, 1 fig., 67–69, 1 fig. [Dipt.]

Someren, E. C. C. van see Haddow & Someren.

2606.—Someren, V. D. van & McMahon, J. Phoretic association between *Afronurus* and *Simulium* species, and the discovery of the early stages of *Simulium neavei* on freshwater crabs. *Nature, London* **166** 1950 pp. 350–351, 1 fig. [Ephem., Dipt.]

2607.—Sommerman, K. M. Obtaining reading and filing microfilm. *Ent. News, Lancaster, Pa.* **60** (1949) 1950 pp. 236–238, 1 fig.

Son see Van Son.

Sonnenblick, B. P. see Demerec, M.

- 2608.—**Soós, A.** Ueber die Chloropiden Ungarns. [In Magyar with German summary.] *Folia ent. hung.*, Budapest 8 1943 pp. 74–84. [Dipt.]
- 2609.—**Sotavalta, O.** Some details and theories of the problem of the flight of insects. *Proc. 8th int. Congr. Ent.* Stockholm 1948, 1950 pp. 297–302, 4 figs.
- 2610.—**Soures, B.** Contribution à l'étude des Lépidoptères de la Tunisie. Biologie des espèces nuisibles ou susceptibles de le devenir. *Ann. Serv. bot. agron. Tunisie, Tunis* 21 (1948) [?1950] pp. 1–211 [+1] 44 pls. 2 figs.
- Sousa, J. de** see Rachou & Sousa.
- 2611.—**Southwood, T. R. E.** *Deraecoris scutellaris* F. (Hem., Miridae) taken in the light traps at Rothamsted, Hertfordshire. *Ent. mon. Mag.*, London 86 1950 p. 78.
- 2612.—**Southwood, T. R. E. & Hine, D. J.** Further notes on the biology of *Sehirus bicolor* (L.) (Hem., Cydnidae). *Ent. mon. Mag.*, London 86 1950 pp. 299–301.
- 2613.—**Souza Lopes, H. de.** Sobre os gêneros *Boettcheria* Parker 1914 e *Boettcherimima* n. gen. (Diptera Sarcophagidae). *Mem. Inst. Oswaldo Cruz, Rio de Janeiro* 48 1950 pp. 687–732, 93 figs.
- 2614.—**Souza Lopes, H. de.** Novas espécies neotrópicas de *Notochaeta* Aldrich e *Dexosarcophaga* Townsend (Diptera, Sarcophagidae). *Rev. bras. Biol., Rio de Janeiro* 10 1950 pp. 353–364, 26 figs.
- 2615.—**Soyer, B.** Notes sur les Sphegiens et les Pompiles. IX. Les Pompiles des vieux murs. *Bull. Soc. linn. Lyon* 19 1950 pp. 181–186. [Hym.]
- 2616.—**Soyka, W.** New and known Alaptids and Mymarids from Egypt (Hymenoptera-Chalcidoidea). *Bull. Soc. Fouad Ier Ent., Cairo* 34 1950 pp. 121–131.
- 2617.—**Spassky, B. & Dobzhansky, T.** Comparative genetics of *Drosophila willistoni*. *Heredity*, London 4 1950 pp. 201–215, 2 figs. [Dipt.]
- 2618.—**Spassky, B., Zimmerling, S. & Dobzhansky, T.** Comparative genetics of *Drosophila prosaltans*.
- 2619.—**Speer, M.** Observações relativas à biologia do "bicho mineiro das folhas do cafeeiro", *Perileucoptera coffeella* (Guérin-Méneville) (Lepidoptera-Bucculatricidae). *Arq. Inst. biol., São Paulo* 19 (1949–50) 1950 pp. 31–47.
- Spencer, G. J.** see Buckell & Spencer.
- 2620.—**Spencer, W. P.** Mutations in wild populations in *Drosophila*. In Demerec, M. *Advances in Genetics*, New York 1 1947 pp. 359–402, 4 figs. [Dipt.]
- 2621.—**Spencer, W. P.** The *Drosophila* of Jackson Hole, Wyoming—a taxonomic and ecological survey. *Amer. Midl. Nat., Notre Dame* 43 1950 pp. 79–87. [Dipt.]
- Spencer, W. P.** see Demerec, M.
- 2622.—**Speyer, E. R. & Parr, W. J.** Animal pests. *Rep. exp. Res. Sta. Cheshunt* 34 (1948) 1949 pp. 43–57, 2 pls.; 35 (1949) 1950 pp. 48–57, 2 pls. [Dipt., Thysanopt.]
- 2623.—**Spiess, E. B.** Experimental populations of *Drosophila persimilis* from an altitudinal transect of the Sierra Nevada. *Evolution, Lancaster, Pa.* 4 1950 pp. 14–33, 3 figs. [Dipt.]
- 2624.—**Spieth, H. T.** The David Rockefeller Mexican Expedition of the American Museum Natural History. Introductory account. *Amer. Mus. Novit., New York no. 1454* 1950 67 pp. 52 figs.
- 2625.—**Spieth, H. T. & Hsu, T. C.** The influence of light on the mating behavior of seven species of the *Drosophila melanogaster* species group. *Evolution, Lancaster, Pa.* 4 1950 pp. 316–325. [Dipt.]
- Spinks, J. W. T.** see Arnason, Fuller & Spinks; Irwin, Spinks & Arnason.
- 2626.—**Squire, F. A.** Age-grouping of tsetse-flies as an aid in the study of their bionomics. *Nature, London* 165 1950 pp. 307–308, 1 graph. [Dipt.]
- Srisukh, S.** see Goodwin & Srisukh.

2627.—**Stadler, H. & Basse-Korff, M.** Die Bewohner einiger Uferpflanzen und ihre Inquilinen und Parasiten. Mitt. Sammelst. Schmarotzerbestim., Aschaffenburg Heft 26 1950 20 pp.

2628.—**Stadler, H. & Basse-Korff, M.** Nächtliche Flieger am Licht. Nachr. Sammelst. Schmarotzerbestim., Aschaffenburg Heft 28 1950 pp. [1+] 1-7.

Stalker, H. D. see Carson & Stalker.

2629.—**Stammer, H. J.** Die Bedeutung der Aethylenglykolfallen für tierökologische und -phänologische Untersuchungen. Verh. dtsch. Zool. Kiel 1948, 1949 pp. 387-391.

2630.—**Stannard, jr., L. J.** A new genus of Phlaeothripidae from Mexico (Thysanoptera). Proc. ent. Soc. Washington 52 1950 pp. 143-146, 1 pl.

2631.—**Starke, H.** Erster Nachtrag zu den Schlupfwespen von K. T. Schütze, Rachlau und Dr. Roman, Stockholm, Isis Budissina, Bautzen 14 (1936-1940) 1940 pp. 63-95. [Hym.]

Starrells, R. see Whiting & Starrells.

2632.—**Starý, B.** *Phytomyza solanellae* n. sp., une nouvelle espèce de la famille des Agromyzidae (Dipt.). [In Czech and French.] Acta Soc. ent. Čsl., Prague 47 pp. 162-165, 7 figs.

2633.—**Statler, S. S. & Jaques, H. E.** A preliminary list of the Hydrophilidae known to occur in Iowa. Proc. Iowa Acad. Sci., Des Moines 56 1949 pp. 399-400. [Col.]

Stauffer, J. F. see Beck & Stauffer; Beck, Lilly & Stauffer.

Stebbins, F. M. see Nabours & Stebbins.

2634.—**Steel, W. O.** Notes on the Omaliinae (Col., Staphylinidae). Ent. mon. Mag., London 86 1950 pp. 29-32, 10 figs.; 54-64, 27 figs.

2635.—**Steel, W. O.** A note on the nomenclature of the British and Continental Staphylinid (Col.) hitherto known as *Xantholinus meridionalis* (Nordm.). Ent. mon. Mag., London 86 1950 pp. 140-141.

2636.—**Steel, W. O.** A new genus and four new species of Phloecharinae (Coleoptera, Staphylinidae) from the Australian region. Proc. Linn. Soc. New South Wales, Sydney 75 1950 pp. 334-344, 29 figs.

2637.—**Steel, W. O.** Notes on Staphylinidae, chiefly from New Zealand. I, II. Trans. Proc. roy. Soc. N.Z., Wellington 78 1950 pp. 203-212, 17 figs., 213-235, 39 figs. [Col.]

2638.—**Steffan, J. R.** Note sur la tribu des Cratocentrini (Hym. Chalcidae Brachymerinae); description de deux espèces nouvelles. Bull. Mus. Hist. nat., Paris (2) 22 1950 pp. 596-602, 4 figs.

2639.—**Steffan, J. R.** Contribution à l'étude de *Zabrotes subfasciatus* Boheman. Mém. Mus. Hist. nat., Paris (N.S.) 21 (1945) 1946 pp. 55-84, 22 figs. [Col.]

2640.—**Stegwee, D.** Properties of insect cholinesterase. Acta physiol. pharmacol. neerl., Amsterdam 1 1950 pp. 336-337, 1 fig. [Col.]

2641.—**Steiner, G.** Quantitative Wahlversuche an Insekten. Verh. dtsch. Zool. Kiel 1948, 1949 pp. 120-122, 1 fig.

2642.—**Steiner, H.** Die Bindung der Hochmoorlibelle *Leucorrhinia dubia* Vand. an ihren Biotop. Zool. Jb., Jena (Syst.) 78 1948 pp. 65-96, 24 figs. [Odon.]

Stekhoven see Schuurmans Stekhoven.

2643.—**Stelfox, A. W.** Notes on the genus *Aspilota* (Hym., Braconidae, Alysiinae) with descriptions of four new species. Ent. mon. Mag., London 86 1950 pp. 9-13, 10 figs.

2644.—**Stelfox, A. W.** On Walker's male *Opius* recorded by Haliday as *O. scabriculus* Wesmael (Hym., Braconidae). Ent. mon. Mag., London 86 1950 pp. 313-314, 1 fig.

2645.—**Stelfox, A. W.** A new species of *Cryptoserphephus* (Hym., Proctotrupinae) from Ireland. Ent. mon. Mag., London 86 1950 pp. 314-315, 5 figs.

- 2646.—**Stelfox**, A. W. Descriptions of two new species of *Phaenocarpa* (Hym., Brac., Alysiinae) from Ireland. Ent. mon. Mag., London **86** 1950 pp. 354–356, 3 figs.
- 2647.—**Stelfox**, A. W. & **Graham**, M. W. R. de V. On *Panerema inops* Först. and allied species of the genus *Aspilota* (Hym., Bracidae, Alysiinae), with descriptions of two new species. Ent. mon. Mag., London **86** 1950 pp. 289–293, 11 figs.
- 2648.—**Stempffer**, A. Description d'une lycène nouveau de la faune malgache. Nat. Malgache, Tananarive **2** 1950 pp. 131–133, 2 figs. [Lep.]
- 2649.—**Stempffer**, H. Contribution à l'étude des Lycaenidae du Liberia. Bull. Inst. franç. Afr. noire, Dakar **12** 1950 pp. 402–407, 3 figs. [Lep.]
- 2650.—**Stempffer**, H. Contribution à l'étude de l'Air. Lépidoptères Lycaenidae. Mém. Inst. franç. Afr. noire, Paris no. 10 1950 pp. 269–270.
- 2651.—**Stempffer**, H. Contribution à l'étude des Lycaenidae éthiopiens. Rev. franç. Ent., Paris **17** 1950 pp. 135–149, 7 figs. [Lep.]
- 2652.—**Sterzl**, O. Wird *Oria (Tapiostola) musculosa* Hbn. auch in unseren Gegenden ein Getreideschädling? Wien. ent. Rdsch., Vienna **1** 1949 p. 6. [Lep.]
- 2653.—**Sterzl**, O. Aus der Praxis der Entomologen. Falterfang mit Köder (Schluss). Wien. ent. Rdsch., Vienna **1** 1949 no. 3 pp. 7–8. [Lep.]
- 2654.—**Sterzl**, O. Entomologische Fachausdrücke. Wien. ent. Rdsch., Vienna **1** 1949 no. 3 pp. 9–10; **2** 1950 pp. 23–24.
- 2655.—**Steyskal**, G. C. A curious habit of an Empidid fly; Third note. Bull. Brooklyn ent. Soc., Lancaster, Pa. **45** 1950 p. 155. [Dipt.]
- 2656.—**Steyskal**, G. C. An easy way to make entomological drawings. Ent. News, Lancaster, Pa. **61** 1950 pp. 137–139.
- 2657.—**Steyskal**, G. C. The genus *Protodictya* Malloch (Diptera, Scionyzyidae). Proc. ent. Soc. Washington **52** 1950 pp. 33–39, 2 figs.
- 2658.—**Steyskal**, G. C. Notes and records of Phytalmiidae (Diptera: Acalyptratae). Wasmann J. Biol., San Francisco **8** 1950 pp. 93–96, 1 fig.
- 2659.—**Steyskal**, G. C. The genus *Sepedon* Latreille in the Americas (Diptera: Scionyzyidae). Wasmann J. Biol., San Francisco **8** 1950 pp. 271–297, 5 pls.
- Stöckhert**, E. see Pittioni & Stöckhert.
- 2660.—**Stöcklein**, F. Ueber einige seltene *Gymnetron*-Arten (Col. Curculionidae). Ent. Arb., München **1** 1950 pp. 277–282, 1 pl. 2 figs.
- 2661.—**Stöcklein**, F. Eine neue Goldwespe aus den bayer. Alpen. Ent. Arb., München **1** 1950 pp. 283–284. [Hym.]
- 2662.—**Stöcklein**, F. v. Ueber das Vorkommen von *Chrysis (Hexachrysis) fasciata* v. *zetterstedti* Dahlb. namentlich in Deutschland (Hym. Chrysidi.). Mitt. münchen. ent. Ges., Munich **40** 1950 pp. 315–318.
- Stoecker**, M. see Autrum & Stoecker.
- 2663.—**Stohl**, G. Die Variabilität der *Andrena*-Arten des Karpatenbeckens (Hym., Apidae). Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 165–173, 2 figs.
- 2664.—**Stoker**, W. J. & **Koesoemawinangoen**, R. Waktoedi. Illustrated map of the Anopheline imagines of Indonesia (English translation). Djakarta, Min. Hlth. Indonesia (Malaria contr.) 1949 69 pp. [Dipt.]
- 2665.—**Stokes**, H. G. Notes and description of ova of *Rhopalus subrufus* Gmel. (Hem.-Het., Coreidae). Ent. mon. Mag., London **86** 1950 pp. 26–28, 5 figs.
- 2666.—**Stokes**, H. G. The early stages of *Sehirus bicolor* L. (Hem., Cydnidae). Ent. mon. Mag., London **86** 1950 pp. 309–310, 2 figs.
- 2667.—**Stone**, A. The larva of *Culex folicaceus* Lane (Diptera, Culicidae). Rev. Ent., Rio de Janeiro **21** 1950 pp. 237–239, 3 figs.

2668.—**Storace, L.** Spedizione zoologica del Marchese Saverio Patrizi nel basso Giuba e nell' Oltregiuba VI-VIII-1934. Lepidotteri diurni. Ann. Mus. Stor. nat., Genova **64** 1949 pp. 12-29.

2669.—**Storace, L.** Note su Lepidotteroologia. Boll. Soc. ent. ital., Genoa **80** 1950 pp. 15-16.

2670.—**Storace, L.** Osservazioni su alcune specie di Charaxidinae (Lepidoptera, Nymphalidae). Doriania, Genoa **1** 1950 no. 2, 8 pp.

2671.—**Storace, L.** La sottospecie abissina di *Euchrysops mauensis* Bethune-Baker (Lepidoptera : Lycaenidae). Doriania, Genoa **1** 1950 no. 7, 2 pp.

2672.—**Strand, A.** Koleopterologiske bidrag V. Norsk ent. Tidsskr., Oslo **8** 1950 pp. 82-84.

2673.—**Straneo, S. L.** Su alcuni Pterostichinae africani del Musée du Congo Belge, Tervuren (Coleoptera Carabidae). Bull. Ann. Soc. ent. Belg., Brussels **86** 1950 pp. 127-140, 11 figs.

2674.—**Straneo, S. L.** Revisione delle specie africane del gen. *Melan-chiton* Andrewes (*Melanodes* Chaudoir et Auctt.) (Col. Carab.). Rev. Zool. Bot. afr., Brussels **44** 1950 pp. 61-104, 78 figs. 1 map.

Straneo, S. L. see Basilewsky & Straneo.

2675.—**Strassen, R.** Zur. Ein neuer Vertreter der Gattung *Cam-poptera*. Senckenbergiana, Frankfurt a. M. **31** 1950 pp. 145-150, 8 figs. [Hym.]

2676.—**Strawiński, K.** Studies of the Hemiptera belonging to the superfamily Pentatomoidae Reut. distributed in the National Park of Białowieża. [In Polish with English summary.] Ann. Univ. Mariae Curie-Skłodowska, Lublin (C) **4** (1949) 1950 pp. 277-296.

2677.—**Strawiński, K.** On the biological dependency of Hemiptera-Heteroptera on trees and shrubs. [In Polish with English summary.] Ann. Univ. Mariae Curie-Skłodowska, Lublin (C) **5** 1950 pp. 65-87.

2678.—**Strawiński, K.** On the ecology of Elateridae (Col.) of the Lublin voivodships territory. [In Polish with Russian and English summaries.] Ann. Univ. Mariae Curie-Skłodowska, Lublin (Sect. C.) **5** 1950 pp. 245-278.

2679.—**Strenger, A.** Ein Beitrag zur Biologie von *Forficula auricularia*. Oesterr. Zool. Z., Vienna **2** 1950 pp. 624-638. [Dermapt.]

2680.—**Strenger, A.** Funktionsstudie des Kopfes von *Forficula auricularia*. Zool. Jb., Jena (Anat.) **70** 1950 pp. 557-575, 19 figs. [Dermapt.]

2681.—**Strenger, A.** Eine funktionsanatomische Untersuchung einiger Dermapterer cerci. Zool. Jb., Jena (Anat.) **70** 1950 pp. 576-600, 12 figs.

2682.—**Strenzke, K.** Die Pflanzenwässer von *Scirpus silvaticus* und ihre Tierwelt. Arch. Hydrobiol., Stuttgart **44** 1950 pp. 123-176, 28 figs.

2683.—**Strenzke, K.** Systematik, Morphologie und Oekologie der terrestrischen Chironomiden. Arch. Hydrobiol., Stuttgart Suppl. **18** 1950 pp. 207-414, 2 pls., 100 figs., 1 fldg. table. [Dipt.]

2684.—**Strenzke, K.** Terrestrische Chironomiden XIV. *Limnophyes flexuellus* Edw. Zool. Anz., Leipzig **145** 1950 pp. 101-111, 17 figs. [Dipt.]

2685.—**Strickland, A. H.** The dispersal of Pseudococcidae (Hemiptera-Homoptera) by air currents in the Gold Coast. Proc. R. ent. Soc. London (A) **25** 1950 pp. 1-9.

2686.—**Strickland, M.** Differences in toleration of drying between species of termites (*Reticulitermes*). Ecology, Durham, N.C. **31** 1950 pp. 373-385, 6 figs. [Isopt.]

2687.—**[Strogaya, G. M.]** The morpho-physiological condition of the noxious little tortoise during the active period of its life. [In Russian.] C.R. Acad. Sci. URSS, Moscow (N.S.) **78** 1950 pp. 217-219. [Hem.]

2688.—**Stroud**, C. P. A survey of the insects of White Sands National Monument, Tularosa Basin, New Mexico. Amer. Midl. Nat., Notre Dame **44** 1950 pp. 659–677, 2 figs.

2689.—**Strouhal**, H. Die Larve des *Trichaphaenops* (*Arctaphaenops*) *angulipennis* Meixn. (Coleoptera, Carabidae). Ann. naturh. Mus. Wien **57** (1949–1950) 1950 pp. 305–313, 8 figs.

2690.—**Stroyan**, H. L. G. The identity of *Aphis tanaceti* L. 1758. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 999–1001. [Hem.]

2691.—**Stroyan**, H. L. G. A new British Aphid species from *Linaria*. Proc. R. ent. Soc. London (B) **19** 1950 pp. 60–63, 1 pl. 8 figs. [Hem.]

2692.—**Stroyan**, H. L. G. *Jacksonia papillata* Theobald (Hemiptera, Aphididae): a redescription with biological and taxonomic notes. Proc. R. ent. Soc. London (B) **19** 1950 pp. 90–95, 1 fig.

2693.—**Stroyan**, H. L. G. Recent additions to the British aphid fauna. Part I: *Dactynotus* Rafinesque to *Rhopalosiphum* Koch, C.L. Trans. R. ent. Soc. London **101** 1950 pp. 89–124. [Hem.]

2694.—**Strubing**, H. Beiträge zur Biologie von *Boreus hiemalis* L. Zool. Beitr., Berlin (N.F.) **1** 1950 pp. 51–110, 4 figs. [Mecopt.]

2695.—**Stumper**, R. Les associations complexes des fourmis. Commensalisme, Symbiose et Parasitisme. Bull. biol. Fr. Belg., Paris **84** 1950 pp. 376–399. [Hym.]

2696.—**Stumper**, R. & **Kutter**, H. Sur le stade ultime du parasitisme social chez les fourmis, atteint par *Teleutomyrmex schneideri* (subtrib.n.; gen. nov.; spec. nov. Kutter). C.R. Acad. Sci., Paris **231** 1950 pp. 876–878. [Hym.]

Stumpf, H. see Autrum & Stumpf.

2697.—**Suire**, J. Faune entomologique de quelques plantes spontanées de la région de Montpellier. I.—Les insectes des *Dorycnium*. Entomologiste, Paris **5** (1949) 1950 pp. 177–186; **6** 1950 pp. 4–13, 10 figs.

2698.—**Šulc**, K. On the repugatorial stink-glands in the beetles of the gn. *Cantharis*, Coleoptera. Bull. int. Acad. tchèque Sci., Prague **50** 1949 no. 8, 22 pp. 11 figs. (Also in Czech in Rozpr. České Akad., Prague (2) **59** čís. 8.)

2699.—**Sundholm**, A. Några intressanta skalbaggar från Blekinge (Col.). Opusc. ent., Lund **15** 1950 pp. 206–208.

2700.—**Surányi**, P. Ueber die minierenden Insektenlarven Ungarns. [In Magyar with German summary.] Folia ent. hung., Budapest **7** 1942 pp. 1–64, 3 pls.

2701.—**Surendra Deo Misra**. Studies on the somatic musculature of the desert locust, *Schistocerca gregaria* (Forskål) phase gregaria. Part III. The pterothorax. Indian J. Ent., New Delhi **9** (1947) 1950 pp. 19–72, 10 figs. [Orth.]

2702.—**Suter**, P. Zur Biologie von *Lecanium corni* Bch. (Homopt. Coccid.). Mitt. schweiz. ent. Ges., Berne **23** 1950 pp. 95–103, 5 figs.

2703.—**Svensson**, I. Lepidopterologiska iakttagelser II. Ent. Tidskr., Stockholm **71** 1950 pp. 46–54.

2704.—**Swain**, R. B. The Insect Guide. Orders and major families of North American Insects. New York, Doubleday & Co. 1948 xliii & 261 pp. 175 figs. (many col.).

2705.—**Sweeney**, R. C. H. Identification of British ants (Hym.: Formicidae) with keys to the genera and species. Ent. Gaz., London **1** 1950 pp. 64–86, 31 figs.

2706.—**Sweeney**, R. C. H. Two teratological specimens of *Myrmica ruginodis* Nylander (Hym., Formicidae) from Denmark. Ent. mon. Mag., London **86** 1950 p. 5.

2707.—**Sweeney**, R. C. H. Some new formicaria and other practical aids to the study of ant-colonies. Ent. mon. Mag., London **86** 1950 pp. 110–116, 7 figs.

2708.—**Swezey**, O. H. Notes on the occurrence and life history of the honeysuckle leafminer, *Swezeyula lonicerae*, in Hawaii. Proc. Hawaii. ent. Soc., Honolulu **14** (1949) 1950 pp. 197–200, 3 figs. [Lep.]

- 2709.—**Świechowska, W.** & **Wyrwalski, R.** Reducing substances in the blood of *Celerio euphorbiae* (Lepid.). [In Polish with English summary.] *Polsk. Pismo ent.*, Wrocław **19** (1949) 1950 pp. 285–298.
- 2710.—**Symczak, M.** Orientation by memory and the social instinct in caterpillars of the large white butterfly (*Pieris brassicae* L.). *Bull. int. Acad. polon. Sci. Lett., Cracovie (BII)* **1949** 1950 pp. 175–193, 3 figs. [Lep.]
- 2711.—**Székessy, V.** Die Coleopteren-Fauna der Storchnester. *Proc. 8th int. Congr. Ent.* Stockholm 1948, 1950 pp. 497–507, 2 figs.
- 2712.—**Székessy, V.** Ein weiterer Beitrag zur Nekrophagie gewisser Elateridenlarven. *Zool. Anz.*, Leipzig **136** 1941 pp. 77–78. [Col.]
- 2713.—**Szent-Ivány, J. v.** Neue Angaben zur Kenntnis der Springschwänze (Collembola) Ungarns. [In Magyar with German summary.] *Folia ent. hung.*, Budapest **6** 1941 pp. 20–27, 1 pl.
- 2714.—**Szent-Ivány, J. v.** Meine Lepidopterologischen Sammelergebnisse 1939 in Norddeutschland. [In Magyar with German summary.] *Folia ent. hung.*, Budapest **7** 1942 pp. 84–95.
- 2715.—**Szent-Ivány, J. v.** Beitrag zur Kenntnis der Lepidopterenfauna von Tiszaderzs. [In Magyar with German summary.] *Folia ent. hung.*, Budapest **7** 1942 pp. 109–112.
- 2716.—**Szilády, Z.** Zwei neue Arten aus den Dipterensammlung von Ignaz Nagy. *Folia ent. hung.*, Budapest **8** 1943 pp. 15–17, 1 fig.
- 2717.—**Szulczewski, J. W.** Contribution to the Coccidae fauna in the district of Ziemia Lubuska. [In Polish with English summary.] *Badan fizjogr. poznań. Tow. Przyj. Nauk* **2** 1950 pp. 219–224. [Hem.]
- 2718.—**Szulczewski, J. W.** Hymenoptera of the National Park of Great Poland. Part IV. Aculeata. [In Polish with English summary.] *Prace Monogr. Przyr. Wielk. Parku Narod.* Poznań **2** 1950 no. 4, 20 pp.
- 2719.—**Szulczewski, J. W.** Zooocidia in the National Park of Great Poland. [In Polish with English summary.] *Prace Monogr. Przyr. Wielk. Parku Narod.* Poznań **2** 1950 pp. 38 pp. 6 figs.
- 2720.—**Tahmisan, T. N.** & **Adamson, D. M.** Oxidase increase in *Melanoplus differentialis* eggs caused by x-irradiation. *J. exp. Zool.*, Philadelphia, Pa. **115** 1950 pp. 379–397. [Orth.]
- 2721.—**Takahashi, R.** The lac insect. [In Japanese.] *Osaka, Jap. Shellac Industries Ltd.* 1949 76 pp. 11 figs. [Not seen.]
- 2722.—**Takahashi, R.** Four new species of Aleyrodidae (Homoptera) from Australia, India and Borneo. *Annot. zool. jap.*, Tokyo **23** 1950 pp. 85–88, 4 figs.
- 2723.—**Takahashi, R.** Some species of Coceidae from the Riouw Islands. Part I. *Insecta matsum.*, Sapporo **17** 1950 pp. 65–72, 5 figs.
- 2724.—**Takahashi, R.** *Paralecanium* and *Platylecanium* from the Malay Peninsula (Coccoidea, Homoptera). *Trans. Kansai ent. Soc., Nishinomiya* **15** 1950 pt. 2 pp. 48–60, 5 figs.
- Takahasi, H.** see *Sasa, Kano & Takahasi*.
- 2725.—**Takeuchi, K.** An interesting new genus and species of the subfamily Blennocampinae from Japan (Tenthredinidae, Hymenoptera). *Trans. Kansai ent. Soc., Nishinomiya* **15** 1950 pt. 2 pp. 17–19.
- 2726.—**Talbot, M.** A comparison of two ants of the genus *Formica*. *Ecology, Durham, N.C.* **29** 1948 pp. 316–325, 2 figs. [Hym.]
- 2727.—**T'ang, Chi-hsüeh & Chin, Yin-ch'ang.** A note on the mode of action of DDT on the grasshopper. *Peking nat. Hist. Bull.* **16** 1948 pp. 243–246. [Orth.]
- 2728.—**Tanner, V. M.** Studies in the weevils of the western United States. No. VII: Description of a new genus. *Great Basin Nat., Provo* **10** 1950 pp. 71–73, 1 fig. [Col.]
- Tartal'a, P.** see *Simić, Nežić & Tartal'a*.
- Tauber, O. E.** see *Scoggin & Tauber*.

2729.—Taubert, A. Beitrag zur Kenntnis der Hymenopterenfauna der Tiefebene zwischen den Flüssen Duna und Tisza. [In Magyar with German summary.] *Folia ent. hung.*, Budapest 8 1943 pp. 45–46.

2730.—Taylor, J. S. Notes on the life-history of a species of *Mesocelis* (Lasiocampidae) with special reference to its parthenogenesis. *J. ent. Soc. sthn Africa*, Pretoria 13 1950 pp. 53–67, 5 figs.

2731.—Taylor, L. R. Synchronous movement of *Aphis fabae* Scop. (Hem., Aphididae). *Ent. mon. Mag.*, London 86 1950 p. 52.

Teh see Chin, Chun-teh.

2732.—Teissier, G. Etude biométrique d'un variant sexuel du Lucane. C.R. 13e Congr. int. Zool. Paris 1948, 1949 pp. 182–184. [Col.]

2733.—Teitelbaum, S. S. & Goulet, P. A color mutant of the leafhopper *Agalliopsis novella* (Say) (Homoptera, Cicadellidae). *Proc. ent. Soc. Washington* 52 1950 pp. 269–271.

Teixeira, C. see Laurentiaux & Teixeira.

2734.—Tempère, G. L'éthologie des Hypurini (Col. Curculionidae) (note préliminaire). *Bull. Soc. ent. France*, Paris 55 1950 pp. 57–61.

Teng, K. F. see Chu & Teng.

2735.—Teyrovský, V. Praecon-nubia and courtship in terrestrial bugs. [In Czech with English summary.] *Acta Acad. Sci. nat. Moravo-Silesiaceae*, Brno 21 1949 fasc. 3, 16 pp. [Hem.]

2736.—Thalenhorst, W. Die Koinzidenz als gradologisches Problem. Eine synökologische Studie. *Z. angew. Ent.*, Berlin 32 1950 pp. 1–48, 6 figs.

2737.—Théodoridès, J. Notes diverses sur les *Necrophorus* (Coleoptera Silphidae). *Bull. Inst. Sci. nat. Belg.*, Brussels 26 1950 no. 52, 20 pp., 6 figs.

2738.—Théodoridès, J. Sur la présence constante de nématodes larvaires Diplogasterinae chez les Geotrupidae (Col. Scarabaeoidea) de France. *Bull. Soc. zool. Fr.*, Paris 74 (1949) 1950 pp. 277–283, 2 figs.

2739.—Théodoridès, J. Experiments on the vesicating properties of species of *Paederus* (Staphylinidae) in France. *Col. Bull.*, Washington, D.C. 4 1950 pp. 21–22.

2740.—Théodoridès, J. Remarques sur l'allotropie chez des Caraïbiques et d'autres Coléoptères. *Entomologiste*, Paris 6 1950 pp. 79–82.

2741.—Théodoridès, J. Présence de larves triongulins de *Meloë proscarabaeus* L. (Col. Meloidae) sur *Oxythyrea funesta* Poda (Col. Scarabaeidae). *Feuille Nat.*, Paris (N.S.) 5 1950 p. 74.

2742.—Théodoridès, J. Observations et remarques sur l'écologie des Nécrophores (Coleoptera Silphidae). *Physiol. comp. oecol.*, The Hague 2 1950 pp. 107–125, 1 pl. 2 figs.

2743.—Théodoridès, J. Observations écologiques dans l'état de New Jersey (Etats-Unis). *Rev. canad. Biol.*, Montreal 9 1950 pp. 9–27, 5 figs.

2744.—Théodoridès, J. Les Nématodes associés à des Geotrupides (Col. Scarabaeoidea) des Pyrénées Orientales et d'Espagne. *Vie et Milieu*, Paris 1 1950 pp. 200–201.

2745.—Théodoridès, J. Observations écologiques et faunistiques sur des Coléoptères coprophages des Pyrénées-Orientales. *Vie et Milieu*, Paris 1 1950 pp. 460–465.

Théodoridès, J. see Dollfus & Théodoridès; Jolivet & Théodoridès; Leclercq & Théodoridès.

2746.—Thérond, J. Deux Histérides (Insectes-Coléoptères) nouveaux pour la faune de France. *Bull. Soc. Etud. Sci. nat. Nîmes* 48 (1936–1946) [?1947] pp. 165–166.

Thérond, J. see Audras & Thérond.

2747.—Thévenard, —. Radiologie de la métamorphose de la mouche. *Nature*, Paris 1950 no. 3179 pp. 89–92, 4 figs. [Dipt.]

2748.—Thienemann, A. Lunzer Chironomiden. *Arch. Hydrobiol.*, Stuttgart Suppl. 18 1950 pp. 1–202, 4 pls., 56 figs., 6 figd. tables. [Dipt.]

2749.—Thienemann, A. Ueber hochalpine *Diamesa*-Formen. *Arch. Hydrobiol.*, Stuttgart Suppl. 18 1950 pp. 203–206, 2 figs. [Dipt.]

2750.—Thienemann, A. *Paratrichocladius holsatus* Goetgh. usw., eine eigentümliche Mosaikart der Orthocladiinen. Zool. Anz., Leipzig **139** 1942 pp. 201–208. [Dipt.]

2751.—Thienemann, A. Chironomiden aus dem Lunzer Seengebiet VIII. Neue Metamorphosen. Zool. Anz., Leipzig **142** 1943 pp. 192–199, 3 figs. [Dipt.]

Thienemann, A. see Gowin & Thienemann.

2752.—Thomas, H. T. Abnormal material bearing on the development of the terminalia of male calypterate cyclorrhaphous Diptera. Parasitology, London **40** 1950 pp. 304–315, 1 pl. 7 figs.

2753.—Thomas, H. T. Field notes on the mating habits of *Sarcophaga* Meigen (Diptera). Proc. R. ent. Soc. London (A) **25** 1950 pp. 93–98, 2 figs.

2754.—Thomas, H. T. A gynandromorph *Sarcophaga* Meigen (Diptera : Calliphoridae), with notes on the sexual dimorphism of that genus. Proc. zool. Soc. London **120** 1950 pp. 155–163, 3 figs.

2755.—Thomas, I. M. The reactions of mosquito larvae to regular repetitions of shadows as stimuli. Aust. J. sci. Res., Melbourne (B) **3** 1950 pp. 113–123, 3 figs. [Dipt.]

2756.—Thomas, M. Un cas intéressant de psychologie animale : la curiosité et la familiarité chez les papillons (suite et fin). Nat. belges, Brussels **31** 1950 pp. 2–6. [Lep.]

2757.—Thomas, M. La curiosité et la familiarité chez les papillons. Avec une note sur un curieux aspect de psychologie du mâle de *Charaxes jasius*, par J. Loritz. Nat. belges, Brussels **31** 1950 pp. 132–136. [Lep.]

2758.—Thomas, M. Les principaux facteurs de la psychologie animale. Scientia, Bologna **85** 1950 pp. 105–113.

2759.—Thompson, G. B. A list of the type-hosts of the Mallophaga and the lice described from them. Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 269–287, 365–382, 717–724.

2760.—Thompson, W. R. (Ed.) A catalogue of the parasites and predators of insect pests. Section 1.

Parasite host catalogue. Part 10. Index of parasites of the Lepidoptera. Ottawa, Ont., Commonw. Bur. biol. Contr. 1950 [2 &] 107 pp.

2761.—Thomsen, M. Contributions to the biology of *Xyloterus domesticus* L. and *Hylecoetus dermestoides* L., two wood-boring Coleoptera. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 804–811, 5 figs.

2762.—Thomsen, M. & Krog, H. *Cerambyx cerdo* L. (= *heros* Scop.) fra subboreal tid i Danmark. Vidensk. Medd. Dansk naturh. Foren., Copenhagen **111** 1949 pp. 131–148, 2 pls. 1 fig. 1 map. [Col.]

2763.—Thorpe, W. H. A note on detour experiments with *Ammophila pubescens* Curt. (Hymenoptera : Sphecidae). Behaviour, Leiden **2** 1950 pp. 257–263, 3 figs.

2764.—Thorpe, W. H. Plastron respiration in aquatic insects. Biol. Rev., Cambridge **25** 1950 pp. 344–390, 16 figs.

2765.—Thurman, E. B. & Johnson, P. T. The taxonomic characters of the larvae of the genus *Culiseta* Felt, 1904 in California (Diptera, Culicidae). Pan-Pacif. Ent., San Francisco **26** 1950 pp. 179–187, 3 pls.

2766.—Thurman, E. B. & Winkler, E. C. A new species of mosquito in California, *Aedes (Ochlerotatus) bicristatus* (Diptera, Culicidae). Proc. ent. Soc. Washington **52** 1950 pp. 237–250, 5 pls. 1 fig.

Thurman, E. B. see Johnson & Thurman.

2767.—Tiegs, O. W. The problem of the origin of insects. Presidential address. Rep. Aust. Ass. Adv. Sci., Sydney **27** (1949) [1950] pp. 47–56, 4 figs.

2768.—[Tiflov, V. E.] To the study of the fauna of fleas (Aphaniptera) of the Eastern part of the Kazakh SSR. [In Russian.] Trav. Sect. Kasakhstan Acad. Sci. URSS **2** 1937 pp. 189–219, 18 figs.

2769.—Tilden, J. W. Biological notes on *Corythucha morrilli* O. & D. (Hemiptera : Tingidae). Ent. News, Lancaster, Pa. **61** 1950 pp. 135–137.

- 2770.—**Tilden, J. W.** Oviposition and behavior of *Liriomyza pusilla* (Meigen) (Diptera: Agromyzidae). Pan-Pacif. Ent., San Francisco **26** 1950 pp. 119–121.
- 2771.—**Tilden, J. W.** Microlepidoptera associated with *Baccharis pilularis*. I. Pterophoridae. Wasmann J. Biol., San Francisco **8** 1950 pp. 81–88.
- 2772.—**Tillmann, E.** Ueber die Einwanderung von *Celerio lineata livornica* Esp. in Mitteleuropa im Jahre 1946 (Lep., Sphingidae). Z. Lepid., Krefeld **1** 1950 pp. 23–29.
- 2773.—**Timberlake, P. H. & Michener, C. D.** The bees of the genus *Proteriades* (Hymenoptera, Megachilidae). Univ. Kansas Sci. Bull., Lawrence **33** 1950 pp. 387–440, 1 pl.
- Timm, C.** see Schaller & Timm.
- 2774.—**Timon-David, J.** Observations sur le peuplement entomologique (Diptères) des Pyrénées ariégeoises. C.R. 13e Congr. int. Zool. Paris 1948, 1949 pp. 475–476.
- 2775.—**Tipton, V. J.** New distributional records for Utah Siphonaptera. Great Basin Nat., Provo **10** 1950 pp. 62–65.
- 2776.—**Tischler, W.** Die Ueberwinterungsverhältnisse der landwirtschaftlichen Schädlinge. Z. angew. Ent., Berlin **32** 1950 pp. 184–194.
- 2777.—**Tischler, W.** Biozönische Untersuchungen bei Hausfliegen. Z. angew. Ent., Berlin **32** 1950 pp. 195–207. [Dipt.]
- 2778.—**Tischler, W.** Biocönnotische Untersuchungen an Wallhecken. Zool. Jb., Jena (Syst.) **77** 1948 pp. 283–400, 11 figs.
- Tobias, E. B.** see Goldsmith, Harnly & Tobias.
- 2779.—**Todd, V.** Prey of harvestmen (Arachnida, Opiliones). Ent. mon. Mag., London **86** 1950 pp. 252–254.
- 2780.—**Tokunaga, M. & Kadowski, S.** Studies on the life history and bionomics of *Phyllotreta vittata* Fabricius. Feeding habits of imaginal insects (continued). Trans. Kansai ent. Soc., Nishinomiya **15** 1950 pt. 2 pp. 61–68. [Col.]
- 2781.—**Toledo Piza, S. de.** Novos Phaneropteridae do Estado de São Paulo, Brasil. Rev. Ent., Rio de J. **21** 1950 pp. 157–160. [Orth.]
- 2782.—**Toledo Piza, S. de.** Novas espécies de Pseudophyllidae do Brasil. Rev. Ent., Rio de Janeiro **21** 1950 pp. 555–560 [+1] 7 figs. [Orth.]
- 2783.—**Toledo Piza, S. de.** Primeiras observações sobre a citologia de fasmidas brasileiros. Scientia Genet., Turin **3** 1950 pp. 227–235, 14 figs. [Orth.]
- 2784.—**Toll, S.** La section *riffensis* du genre *Coleophora* Zell. Bull. Soc. ent. Mulhouse **1950** 1950 pp. 83–85, 7 figs. [Lep.]
- 2785.—**Toll, S.** Taxonomic importance of copulatory apparatus. [In Polish with English summary.] Polsk. Pismo ent., Wrocław **19** (1949) 1950 pp. 174–195, 3 pls. [Lep.]
- 2786.—**Tollet, R.** Ceroplatinae orientales (Diptera, Mycetophilidae). Bull. Inst. Sci. nat. Belg., Brussels **26** 1950 no. 24, 5 pp. 4 figs.
- 2787.—**Torres, B. A.** El Cercópido, *Cephisus siccifolius* (Walker, 1851). Notas Mus. La Plata **15** (Zool.) 1950 no. 131 pp. 7–16, 3 pls., 3 figs. [Hem.]
- 2788.—**Tóth, L.** Protein metabolism and nitrogen fixation by means of microorganisms living in symbiosis with insects. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 303–306, 1 fig.
- 2789.—**Tóth, L. & Wolsky A.** Gaswechsel und respiratorischer Quotient bei den Aphiden. Zool. Anz., Leipzig **136** 1941 pp. 99–103. [Hem.]
- 2790.—**Toumanoff, C.** L'intercroisement de l'*Aedes (Stegomyia) aegypti* L. et *Aedes (Stegomyia) albopictus* Skuse. Observations sur la mortalité dans la descendance des générations hybrides F_1 et F_2 de ces insectes. Bull. Soc. Path. exot., Paris **43** 1950 pp. 234–240. [Dipt.]
- 2791.—**Toumanoff, C.** Contribution à l'étude des Tabanides de l'Indochine. Bull. Soc. Path. exot., Paris **43** 1950 pp. 372–384, 6 pls. [Dipt.]

2792.—**Toumanoff, C.** Action de *Bacillus larvae* W., agent pathogène de la Loque maligne des larves d'abeilles sur les chenilles de *Galleria melonella* L. C.R. Acad. Sci., Paris **230** 1950 pp. 1709–1711. [Lep.]

Touron, E. A. see Chiarelli de Gahan & Touron.

2793.—**Townes, H.** The Nearctic species of Gasteruptiidae (Hymenoptera). Proc. U.S. nat. Mus., Washington, D.C. **100** 1950 no. 3259 pp. 85–145, 26 figs.

2794.—**Townes, H. K. & M. C.** A revision of the genera and of the American species of Tryphonini (Hymenoptera: Ichneumonidae). Part II. Ann. ent. Soc. Amer., Columbus **42** (1949) 1950 pp. 397–447, 5 pls.

2795.—**Townsend, C. C.** The Staphylinidae and Pselaphidae of Gloucestershire. Proc. Cotteswold Nat. Fld. Cl., Gloucester **30** 1950 pp. 52–62. [Col.]

2796.—**Toxopeus, L. J.** On the distribution of *Delias crithoe* (Boisd.) in Java (Lep., Pieridae). Idea, Bogor (Buitenzorg) **8** 1950 pp. 30–45, 1 pl. 1 map.

2797.—**Toxopeus, L. J.** The geological principles of species evolution in New Guinea (a study of parallelisms in geological and lepidopterological development). Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 508–522, 3 maps, 7 figs.

2798.—**Toxopeus, L. J.** On two species from Celebes and a note regarding *Delias sthenobaea* (Boisd.) (Rhopalocera, Pieridae). Zool. Meded., Leiden **31** 1950 pp. 63–66, 1 pl.

Trapido, H. see Fairchild & Trapido.

2799.—**Traub, R.** Siphonaptera from Central America and Mexico. A morphological study of the aedeagus with descriptions of new genera and species. Fieldiana, Chicago Zool. Mem. **1** 1950 pp. 1–127, 54 pls.

2800.—**Traub, R.** *Sigmactenus*, a new genus of flea from the Philippines. J. Washington Acad. Sci. **40** 1950 pp. 371–378, 14 figs. [Siphonapt.]

2801.—**Traub, R.** Notes on Indo-Malayan fleas, with descriptions of new species (Siphonaptera). Proc. ent. Soc. Washington **52** 1950 pp. 109–143, 14 pls.

2802.—**Traub, R. & Gammons, J. G.** Two new fleas of the family Tungidae. J. Parasit., Lancaster, Pa. **36** 1950 pp. 270–273, 3 figs. [Siphonapt.]

2803.—**Travassos, L.** Contribuição ao conhecimento dos Arctiidae. XXI–XXII. Rev. bras. Biol., Rio de Janeiro **10** 1950 pp. 217–240, 61 figs.; pp. 447–464, 40 figs. [Lep.]

2804.—**Traver, J. R.** Notes on neotropical mayflies. Part IV. Family Ephemeridae (continued). Rev. Ent., Rio de Janeiro **21** 1950 pp. 593–614, 22 figs.

2805.—**Troníček, E.** Sur le mouvement des papillons éclos, spécialement de l'espèce *Brachionycha nubeculosa* Esp. (Lepid. Noct.). [In Czech with French summary.] Acta Soc. ent. Čsl., Prague **47** 1950 pp. 186–192.

2806.—**Tsao, C.** Biological notes on a common paper wasp in Kunming, *Polistes mandarinus* Saussure. Peking nat. Hist. Bull. **19** 1950 pp. 45–48. [Hym.]

2807.—**Tschumi, P.** Ueber den Werbetanz der Bienen bei nahen Trachtquellen und seine richtungsweisende Bedeutung. Rev. suisse Zool., Geneva **57** 1950 pp. 584–590, 4 figs. [Hym.]

2808.—**Tsuneki, K.** Some experiments on colour vision in ants. J. Fac. Sci. Hokkaido Univ., Sapporo (Zool.) **10** 1950 pp. 77–86, 1 fig. [Hym.]

2809.—**Tsuneki, K.** Descriptions of new species and subspecies of the Chrysidae from East Asia (Hymenoptera). Mushi, Fukuoka **21** 1950 pp. 61–81.

2810.—**Tuft, P. H.** The structure of the insect egg-shell in relation to the respiration of the embryo. J. exp. Biol., London **26** 1950 pp. 327–334, 2 figs. [Hem.]

2811.—**Tulloch, G. S. & Shapiro, J. E.** The microtrichiae of *Anopheles albimanus* Wiedemann. Bull. Brooklyn ent. Soc., Lancaster, Pa. **45** 1950 pp. 49–50, 1 fig. [Dipt.]

- 2812.—**Tulloch, G. S. & Shapiro, J. E.** The microtrichiae of *Urano-taenia*. Bull. Brooklyn ent. Soc., Lancaster, Pa. **45** 1950 pp. 72–73. [Dipt.]
- 2813.—**Turner, A. H.** Some notes on the flower preferences of the butterflies. J. Soc. Brit. Ent., Bournemouth **3** 1950 pp. 210–211, 1 figd. table. [Lep.]
- 2814.—**Turner, H. J.** The British Noctuae and their varieties. Supplement. [Contd.] Ent. Rec., London **62** 1950 sep. pp. 77–94.
- 2815.—**Tuthill, L. D.** Taxonomic notes on two South American Psyllids (Homoptera). Ent. News, Lancaster, Pa. **61** 1950 pp. 178–179.
- 2816.—**Tuthill, L. D.** Contributions to the knowledge of the Psyllidae of Mexico (Part II). J. Kansas ent. Soc., Manhattan **23** 1950 pp. 52–63, 1 pl. [Hem.]
- 2817.—**Tuxen, S. L.** Ueber ein neues, sehr abweichendes Stadium in der postembryonalen Entwicklung der Proturen. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 577–583, 8 figs.
- 2818.—**Tuzet, O., Bonnet, A. & Caillar, J. du.** Contribution à l'étude de la faune cavernicole de Languedoc méditerranéen. Publ. Mus. Hist. nat., Paris no. 8 1947 pp. 53–64; no. 10 1948 pp. 53–62, 1 map.
- 2819.—**Tweedie, M. W. F.** Photographing butterflies. Malayan Nature J., Kuala Lumpur **5** 1950 pp. 84–87, 4 pls.
- Twining, H.** see Ferrel, Twining & Herkenham.
- Twinn, C. R.** see Hocking, Richards & Twinn.
- 2820.—**Uchida, S.** Studies on the biting-lice (Mallophaga) of Japan and adjacent territories (suborder Ischnocera pts. I, II). Jap. med. J. **1** no. 4 1948 pp. 303–326, no. 6 (1948) 1949 pp. 535–556, 17 figs.
- 2821.—**Uhmann, E. von.** Hispinae aus dem Britischen Museum.—V. Teil. Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 324–337, 4 figs.
- 2822.—**Uhmann, E.** Praeimaginalstadien einiger mittelamerikanischer Hispinae. Ark. Zool., Stockholm **42A** 1950 no. 20, 43 pp. 25 figs. [Col.]
- 2823.—**Uhmann, E.** Nachtrag zu meiner Arbeit über die "Praeimaginalstadien einiger mittelamerikanischer Hispinae". Ark. Zool., Stockholm **42A** 1950 no. 21, 10 pp. 2 figs. [Col.]
- 2824.—**Uhmann, E.** Die Deckenskulptur von *Octotoma Suffr.* und verwandten Gattungen. Rev. Ent., Rio de Janeiro **21** 1950 pp. 259–274, 7 figs. [Col.]
- 2825.—**Uhmann, E.** Die Unter-gattung *Cryptonychus* s. str. Zool. Anz., Leipzig **139** 1942 pp. 17–22, 6 figs. [Col.]
- 2826.—**Uichanco, L. B.** A revision of the genus *Ectenus* Dallas, with description of a new species (Hemiptera, Pentatomidae). Philipp. J. Sci., Manila **78** 1949 [?1950] pp. 285–289.
- 2827.—**Ullyett, G. C.** Pupation habits of sheep blowflies in relation to parasitism by *Mormoniella vitripennis*, Wlk. (Hym., Pteromalid.). Bull. ent. Res., London **40** 1950 pp. 533–537.
- 2828.—**Ullyett, G. C.** Distribution of progeny by *Cryptus inornatus* Pratt (Hymenoptera: Ichneumonidae). Canad. Ent., Guelph **81** (1949) 1950 pp. 285–299, 10 figs.; **82** 1950 pp. 1–11, 3 figs.
- 2829.—**Ullyett, G. C.** Competition for food and allied phenomena in sheep in blowfly populations. Philos. Trans., London **234B** 1950 pp. 77–174, 50 figs. [Dipt.]
- 2830.—**Ulmer, G.** Eine neue *Stactobia*-Art und ihre Larve aus Bulgarien, nebst Bemerkungen über die anderen europäischen Arten der Gattung (Trichopt.). Arch. Hydrobiol., Stuttgart **44** 1950 pp. 294–300, 4 figs.
- 2831.—**Uno, M.** On the study of Japanese Anthribidae (Col.) (1). [In Japanese.] Ent. Rev. Japan, Osaka **5** 1950 pp. 48–52, 2 pls.

2832.—Urbahn, E. Beobachtungen auf Rügen 1943–45 (Eine Ergänzung zur "Pommernfauna"). Z. Lepid., Krefeld **1** 1950 pp. 11–21, 1 pl. 2 maps.

2833.—Urbani, E. Osservazioni preliminari sugli acidi nucleici e sulla natura della "massa-di Giardina" nell'ocite di *Dytiscus marginalis*. R.C. Accad. Lincei (8) **8** 1950 pp. 153–155, 1 fig., pp. 504–508, 7 figs. [Col.]

2834.—Urbani, E. Studio comparativo della massa di Giardina nei Dytiscidae. R.C. Accad. Lincei, Rome (8) **9** 1950 pp. 384–389, 1 pl. [Col.]

2835.—Usinger, R. L. The origin and distribution of apterous Aradidae. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 174–179. [Hem.]

Usinger, R. L. see China & Usinger; China, Usinger & Villiers.

2836.—Ussing, H. Om mørkets leddyra fauna. Flora og Fauna, Copenhagen **56** 1950 pp. 42–45, 1 fig.

2837.—Utida, S. On the equilibrium state of the interacting population of an insect and its parasite. Ecology, Durham, N.C. **31** 1950 pp. 165–175, 3 figs.

2838.—Uvarov, B. P. On the insect fauna of Cyprus. Results of the expedition of 1939 by Harald, Håkan and P. H. Lindberg. IV. Tettigoniidae and Acrididae. Comment. biol., Helsingfors **10** 1949 no. 10 6 pp. [Orth.]

2839.—Uvarov, B. P. A second New Zealand stick-insect (Phasmatoidea) established in the British Isles. Proc. R. ent. Soc. London (B) **19** 1950 pp. 174–175, 1 fig. [Orth.]

2840.—Vago, C. Diversité des symptômes extérieurs dans une même maladie à ultravirüs d'insectes. C.R. Acad. Sci., Paris **231** 1950 pp. 1587–1588. [Lep.]

2841.—Vaillant, F. Les premiers stades de *Dolichopus griseipennis* Stann. (Dolichopodidé). Bull. Soc. zool. France, Paris **75** 1950 pp. 80–84, 21 figs. [Dipt.]

2842.—Vaillant, F. Contribution à l'étude des Stratiomyidae du genre *Hermione* Meigen. Rev. franç. Ent., Paris **17** 1950 pp. 245–255, 29 figs. [Col.]

2843.—Valadares, M. & Charconnet-Harding, F. Influence du tryptophane alimentaire sur la pigmentation des yeux de *Drosophila melanogaster*. Cas de la mouche sauvage et du mutant vermillon. C.R. Acad. Sci., Paris **231** 1950 pp. 76–77. [Dipt.]

2844.—Valkeila, E. Notes on the Lepidoptera of Hämeenlinna and its neighbourhood (EH). [In Finnish with English summary.] Ann. ent. fenn., Helsinki **15** (1949) 1950 pp. 157–159, 2 maps.

Valle, A. see Bianchi, Capriacco, Massera & Valle.

2845.—Valle, K. J. Variabilitätsuntersuchungen an finnischen Odonaten. II. *Aeschna coerulea* Ström. Ann. ent. fenn., Helsinki **16** 1950 pp. 97–101, 1 fig. 3 diagr.

2846.—Valletta, A. Moths taken in Malta at light, 1948–1949. Ent. mon. Mag., London **86** 1950 pp. 306–308.

2847.—Valletta, A. Recent additions to the known Lepidoptera of the Maltese Islands (Heterocera). Entomologist, London **83** 1950 pp. 252–254.

Van der Kuyp see Kuyp.

2848.—Vanderplank, F. L. Air-speed/wing-tip speed ratios of insect flight. Nature, London **165** 1950 pp. 806–807.

van der Vecht see Vecht.

van Deurs see Deurs.

van Dinther see Dinther.

van Heerdt see Heerdt.

van Hille see Hille.

van Hoegaerden, A. see Crèvecoeur & van Hoegaerden.

2849.—Van Pelt, A. F. *Orasema* in nests of *Pheidole dentata* Mayr (Hymenoptera: Formicidae). Ent. News, Lancaster, Pa. **61** 1950 pp. 161–163, 1 fig.

2850.—**Vanschuytbroeck, P.** Dip-tères Sphaeroceridae du Musée du Congo belge. Ann. Mus. Congo belge, Tervuren (Sér. 8°) Sci. zool. **5** 1950 46 pp. 6 figs.

2851.—**Vanschuytbroeck, P.** Contribution à l'étude des Sphaeroceridae africains (Diptera Acalyptratae). Bull. Inst. Sci. nat. Belg., Brussels **26** 1950 no. 25, 19 pp.

2852.—**Vanschuytbroeck, P.** There-vidae (Diptera Orthorrhapha). Explor. Parc nat. Albert, Miss. de Witte (1933-1935), Brussels 1950 fasc. **70** p. 21.

2853.—**Vanschuytbroeck, P.** Cono-pidae (Diptera Cyclorrhapha). Explor. Parc nat. Albert, Miss. de Witte (1933-1935) Brussels 1950 fasc. **70** pp. 23-25.

van Someren see Someren.

2854.—**Van Son, G.** The butterflies of southern Africa. Transvaal Mus. Mem., Pretoria no. 3 1949 vi & 237 pp. 41 pls. 132 figs. [Lep.]

van Wisselingh see Wisselingh.

2855.—**Vappula, N. A.** Finnish entomological literature published in 1948 including economic entomology and control of insect pests. Ann. ent. fenn. **16** appx. 1950 16 pp.

2856.—**Vargas, L.** Los subgéneros de *Aedes*. *Downsiomyia* n. subgen. (Diptera : Culicidae). Rev. Inst. Salubr. Enferm. trop. Mexico **11** 1950 pp. 61-67, 1 pl.

2857.—**Vargas, L.** Nota sobre *Aedes*. Revision de algunos *Ochlerotatus* americanos. *Kummyia* n. subgen. (Diptera Culicidae). Rev. Soc. mexicana Hist. nat. **11** 1950 pp. 149-159, 3 figs.

2858.—**Vargas, L.** Nota sobre la distribución holártica del grupo *maculipennis* y del subgénero *Coelodiazesis*. *Missirolimyia*, nov. subg. de *Anopheles* (Diptera : Culicidae). Riv. Parassit., Rome **11** 1950 pp. 73-84, 1 fig.

2859.—**Vargas, L. & Downs, W. G.** Tres especies nuevas de *Aedes* (Diptera, Culicidae). Rev. Soc. mexicana Hist. nat. **11** 1950 pp. 161-181, 22 figs.

2860.—**Vargas, L. & Martinez Palacios, A.** Estudio taxonómico de los mosquitos anofelinos de México. Mexico, D.F., Secr. Salubr. Asist. 1950 143 pp. 62 figs. [Dipt.]

2861.—**Vári, L.** Nederlandse Lepidoptera. Ent. Ber., Amsterdam **13** 1950 pp. 180-184, 11 figs.

2862.—[**Vasil'ev, K. A.**] Migratory flights of the Italian locust (*Calliptamus italicus* L.). [In Russian.] C.R. Acad. Sci. URSS, Moscow (N.S.) **74** 1950 pp. 385-388, 2 figs. [Orth.]

2863.—[**Vasil'ev, K. A.**] Phases in the Italian locust (*Calliptamus italicus* L.). [In Russian.] C.R. Acad. Sci. URSS, Moscow (N.S.) **74** 1950 pp. 639-642, 2 figs. [Orth.]

2864.—**Vaurie, P.** Four new subspecies of the genus *Cicindela* (Coleoptera, Cicindelidae). Amer. Mus. Novit., New York no. 1458 1950, 6 pp.

2865.—**Vaurie, P.** The blister-beetles of North Central Mexico (Coleoptera, Meloidae). Amer. Mus. Novit., New York no. 1477 1950 68 pp. 21 figs.

2866.—**Vaurie, P.** Notes on the habitats of some North American tiger beetles. J. New York ent. Soc. **58** 1950 pp. 143-153. [Col.]

2867.—**Vaurie, P.** A western race of *Languria Mozardi* (Coleoptera : Languriidae). Pan-Pacif. Ent., San Francisco **26** 1950 pp. 191-192.

2868.—**Vayssiére, P.** Coccidae (Hemiptera Homoptera). Explor. Parc nat. Albert, Miss. de Witte (1933-1936), Brussels 1950 fasc. **70** p. 5.

2869.—**Vázquez, G., L.** Estudio y descripción de una especie nueva de psíquido, *Oiketicus mortonjonesi* spec. nov. An. Inst. Biol. Mexico **20** (1949) 1950 pp. 399-406, 10 figs. [Lep.]

2870.—**Vecht, J. van der.** The coconut leaf moth (*Artona catoxantha* Hamps.). Part I. Life history and habits of *Artona catoxantha*, its parasites and hyperparasites. Contr. gen. agric. Res. Sta. Bogor (Buitenzorg), no. 110 1950 77 pp. 21 figs. [Lep.]

2871.—**Vecht, J. van der.** A note on the Larrid wasps *Dalara schlegelii* (Rits.) and *Hyloliris mandibularis* Will. (Hym. Sphecoidea). Idea, Bogor (Buitenzorg) **8** 1950 pp. 14–16, 5 figs.

2872.—**Vecht, J. van der.** Bees and wasps of the Malay Archipelago, and some notes on taxonomic entomology in general. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 180–184. [Hym.]

2873.—**Venturi, F.** *Pseudonapomyza dianthicola* n. sp. (Dipt. Agromyzidae) minatrice delle foglie di garofano. Redia, Florence **34** 1949 pp. 161–164, 5 figs.

2874.—**Venturi, F.** La costruzione del bozzolo da parte della larva matura di *Lema melanopa* L. (Coleoptera Chrysomelidae) ed elementi di anatomia del suo tubo digerente. Redia, Florence **34** 1949 pp. 217–231, 7 figs.

2875.—**Verbeke, J.** Sciomyzidae (Diptera Cyclorrhapha). Explor. Parc nat. Albert, Miss. de Witte (1933–1935) Brussels fasc. **66** 1950 97 pp. 80 figs.

2876.—**Verdcourt, B.** Further records of Bedfordshire Hemiptera-Heteroptera. Ent. mon. Mag., London **86** 1950 pp. 6–8.

2877.—**Verdier, P., Quézel, P. & Rioux, J. A.** Description de deux Coléoptères Carabiques nouveaux. Bull. Soc. ent. France, Paris **55** 1950 pp. 130–132, 4 figs.

Verdier, P. see Quézel, Verdier & Rioux.

2878.—**Verhoeff, P. M. F.** Taxonomie der niederländischen *Hedychrumb*-Arten (*Hedychrumb* Latr., Hym. Chrys.). Publ. natuurh. Genootsch. Limburg **3** 1950 pp. 3–8, 4 figs.

2879.—**Verrier, M. L.** La poecilogonie chez les Ephémères. Etude anatomique et écologique. Année biol., Paris **54** 1950 pp. 297–312, 4 figs.

2880.—**Verrier, M. L.** Les tropismes et la répartition des Ephémères. C.R. 13e Congr. int. Zool. Paris 1948, 1949 pp. 184–185.

2881.—**Verrier, M. L.** Poecilogonie, écologie et répartition géographique chez les Ephémères. C.R. Acad. Sci., Paris **230** 1950 pp. 1794–1796.

Verrier, M. L. see Bayard & Verrier; Bertrand & Verrier; Grenier & Verrier.

2882.—**Vesey-Fitzgerald, D.** Nesting habits of some Aculeate Hymenoptera in the Seychelles. Proc. R. ent. Soc. Lond. (A) **25** 1950 pp. 75–80, 1 pl.

2883.—**Vesey-Fitzgerald, D.** Notes on the genus *Ropalidia* (Hymenoptera: Vespidae) from Madagascar. Proc. R. ent. Soc. London (A) **25** 1950 pp. 81–86.

Vetter, M. H. see Nicholson & Vetter.

2884.—**Viado, G. B.** Reproductive capacity of the oriental migratory locust. Philippine Agric., Laguna **33** 1950 pp. 221–238, 2 pls. 1 fig. [Orth.]

2885.—**Viamonte, R.** Los anofelinos de España y Marruecos español. Rev. Sanid. Hig. públ., Madrid **24** 1950 pp. 211–295, 32 figs. (12 col.). [Dipt.]

Viana, M. J. see Monrós & Viana.

2886.—**Vibe, C.** Some insects new to Greenland. Ent. Medd., Copenhagen **25** 1950 pp. 419–420.

Viel, G. see Grison & Viel.

2887.—**Viette, P.** Lépidoptères Rhopalocères de l'Océanie française. Faune de l'Empire fran., Paris **13** 1950 pp. 1–101, 126 figs. [Lep.]

2888.—**Viette, P. E. L.** Lépidoptères de l'île de Pâques. Bull. Inst. Sci. nat. Belg., Brussels **26** 1950 no. 39 7 pp., 1 fig.

2889.—**Viette, P. E. L.** Contribution à l'étude des Hepialidae (21e note). Description d'une nouvelle espèce. Bull. Inst. Sci. nat. Belg., Brussels **26** 1950 no. 44 2 pp., 1 fig.

2890.—**Viette, P.** Sur les Lépidoptères de Saint-Jean-de-Losne (2e note). Bull. sci. Bourgogne, Dijon **11** (1946–1947) 1948 pp. 91–95.

- 2891.**—Viette, P. Contribution à l'étude des Hépialides (16^e note). Sur quelques espèces de la collection Pfitzner. Bull. Soc. ent. France, Paris **55** 1950 pp. 116–119, 6 figs. [Lep.]
- 2892.**—Viette, P. Contribution à l'étude des Micropterygidae (6^e note). Description d'une nouvelle espèce (Lep.). Bull. Soc. ent. France, Paris **55** 1950 pp. 135–137, 2 figs.
- 2893.**—Viette, P. Contribution à l'étude des Hepialidae (18^{me} note). Description d'un nouveau genre et d'une nouvelle espèce. Bull. Soc. linn. Lyon **19** 1950 pp. 169–170, 2 figs. [Lep.]
- 2894.**—Viette, P. Sur quelques espèces de Geométrides décrites par Guénée (1857). Bull. Soc. linn. Lyon **19** 1950 pp. 201–206. [Lep.]
- 2895.**—Viette, P. Une nouvelle Geometridae de Nouvelle Calédonie (Lépidoptère). Bull. Soc. zool. France, Paris **74** (1949) 1950 pp. 241–244, 5 figs.
- 2896.**—Viette, P. Contribution à l'étude des Hepialidae (20^e note). Le genre *Druceella* Vtt. Bull. Soc. zool. France, Paris **75** 1950 pp. 165–169, 11 figs. [Lep.]
- 2897.**—Viette, P. Contribution à l'étude des Hepialidae (19^{ème} note). Ent. Tidskr., Stockholm **71** 1950 pp. 144–146, 4 figs. [Lep.]
- 2898.**—Viette, P. Croisière du Bougainville aux îles australes françaises XX. Lépidoptères. Mém. Mus. Hist. nat., Paris (N.S.) **27** 1948 pp. 1–28, 2 pls. 22 figs.
- 2899.**—Viette, P. Description d'une nouvelle espèce de Noctuidae Catocalinae. Nat. malgache, Tana-narive **2** 1950 pp. 47–49, 4 figs. [Lep.]
- 2900.**—Viette, P. E. L. The Noctuidae Catocalinae from New Caledonia and the New Hebrides (Lepidoptera). Pacific Sci., Honolulu **4** 1950 pp. 139–157, 13 figs.
- 2901.**—Viette, P. E. L. Contribution to the study of Hepialidae (9th note) : the genus *Phassodes* Bethune-Baker (Lepidoptera). Proc. Hawaii. ent. Soc., Honolulu **14** (1949) 1950 pp. 189–190, 4 figs.
- 2902.**—Viette, P. Contribution à l'étude des Hepialidae (15^e note). Genres et espèces de l'Amérique latine. Rev. franç. Ent., Paris **17** 1950 pp. 52–62, 11 figs. [Lep.]
- 2903.**—Viette, P. E. L. Contribution à l'étude des Hepialidae (22^{ème} note). Hepialidae du Musée de Leiden. Zool. Meded., Leiden **31** 1950 pp. 67–77, 18 figs. [Lep.]
- 2904.**—Vilarrúbia, A. Les zoodécies de les plantes de Catalunya. Treb. Mus. Ciènc. nat. Barcelona **11** 1936 no. 10, 106 pp., 168 figs.
- 2905.**—Vilarrúbia, A. Hallazgo de las *Maculinea alcon* Schiff. y *M. arcas* Rott. en la provincia de Soria. (Lep. Lyc.). Trab. Mus. Cienc. nat. Barcelona (N.S. Zool.) **1** 1948 no. 2 pp. 5–10. [Lep.]
- 2906.**—Villeneuve de Janti, J. Nouvelles espèces africaines du genre *Degeeria* Meigen. Bull. Inst. Sci. nat. Belg., Brussels **26** 1950 no. 9, 8 pp. [Dipt.]
- 2907.**—Villiers, A. Note d'entomologie ouest-africaine. I. Descriptions de nouveaux Hémiptères Hétéroptères. Bull. Inst. franç. Afr. noire, Dakar **12** 1950 pp. 634–659, 17 figs.
- 2908.**—Villiers, A. Hémiptères récoltés au Libéria par P.-L. Dekeyser et B. Holas. Bull. Inst. franç. Afr. noire, Dakar **12** 1950 pp. 930–939.
- 2909.**—Villiers, A. Types d'Arthropodes déposés en 1949 au Muséum national d'Histoire naturelle de Paris par l'Institut français d'Afrique Noire de Dakar (2^e liste). Bull. Mus. Hist. nat., Paris (2) **21** (1949) 1950 pp. 700–706.
- 2910.**—Villiers, A. Les Reduviidae malgaches. VI. Piratinae. Formes nouvelles. Bull. Mus. Hist. nat., Paris (2) **21** (1949) 1950 pp. 707–709. [Hem.]
- 2911.**—Villiers, A. Contribution à l'étude de l'Aïr. Coléoptères Lyctidae et Bostrichidae (pp. 198–199); Cerambycidae (pp. 199–201, 1 fig.); Scarabaeoides (pp. 218–230, 1 pl. 3 figs.); Lépidoptères Danaididae et Nymphalidae (p. 268); Hémiptères Reduviidae (pp. 317–321, 1 fig.);

Pyrrhocoridae, Coreidae, Pentatomidae et Coptosomatidae (pp. 322-328, 4 figs.). Mém. Inst. franç. Afr. noire, Paris no. 10 1950.

2912.—Villiers, A. Révision des Emésides africains (Hémiptères Réduviides). Mém. Mus. Hist. nat., Paris (N.S.) **23** 1949 pp. 257-392, 337 figs.

2913.—Villiers, A. Hémiptères Réduviides récoltés en Angola par A. de Barros Machado. Publ. cult. Mus. Dundo, Comp. Diam. Angola, Lisbon no. 7 1950 pp. 71-108, 13 figs.

Villiers, A. see China, Usinger & Villiers.

Vinogradov, B. S. see Pavlovskii & Vinogradov.

2914.—Vinson, J. New species of Coleoptera from the Mascarene Islands. Proc. R. ent. Soc. London (B) **19** 1950 pp. 142-147, 4 figs.

2915.—Vinson, J. L'île Ronde et l'île aux Serpents. Proc. R. Soc. Arts Sci. Mauritius, Port Louis **1** 1950 pp. 32-52, 4 pls. 2 figs. (insects p. 45).

2916.—Viosca, jr., P. Distribution of certain cold-blooded animals in Louisiana in relationship to the geology and physiography of the state. Proc. Louisiana Acad. Sci., Baton Rouge **8** (1943) 1944 pp. 47-62, 3 maps.

Vivino, A. E. see Haydak & Vivino.

2917.—Vlach, V. Contribution à la connaissance de la faune lépidoptérologique de la Bohême. [In Czech with French summary.] Acta Soc. ent. Čsl., Prague **47** 1950 pp. 60-61.

2918.—Vlach, V. Further new discoveries of Microlepidoptera from Bohemia. Acta Soc. ent. Čsl., Prague **47** 1950 pp. 192-193.

2919.—Vleugel, D. A. "Intelligentes" Verhalten einer Hornisse (*Vespa crabro* L.) bei der Bienenjagd. Ent. Ber., Amsterdam **13** 1950 pp. 91-92. [Hym.]

2920.—Vockeroth, J. R. Specific characters in tarsal claws of some species of *Aedes* (Diptera: Culicidae). Canad. Ent., Guelph. **82** 1950 pp. 160-162, 3 figs.

2921.—Vogel, W. Untersuchungen über parasitische Hymenopteren der Kirschenfliege. Mitt. schweiz. ent. Ges., Berne **23** 1950 pp. 195-199, 5 figs.

2922.—Vogel, W. Eibildung und Embryonalentwicklung von *Melontha vulgaris* F. und ihre Auswertung für die chemische Maikäferbekämpfung. Z. angew. Ent., Berlin. **31** 1950 pp. 537-582, 33 figs. [Col.]

2923.—Vogt, G. B. Occurrence and records of Nitidulidae. Col. Bull., Washington, D.C. **4** 1950 pp. 81-91.

2924.—Vogt, M. Zur labilen Determination der Imaginalscheiben von *Drosophila* I, III, V. Biol. Zbl., Leipzig **65** 1946 pp. 223-238, 5 figs.; **66** 1947 pp. 81-105, 5 pls., 12 figs., pp. 388-395, 4 figs. [Dipt.]

2925.—Vogt, M. Analyse durch Aethylurethan bei *Drosophila* induzierter Mutationen. Z. indukt. Abstamm.-u. VererbLehre, Berlin **83** 1950 pp. 324-340, 5 figs. [Dipt.]

2926.—Vogt, M. Ergänzende Belege zur mutagenen Wirkung der Urethane (Carbaminsäureester) bei *Drosophila*. Z. indukt. Anstamm.-u. VererbLehre, Berlin **83** 1950 pp. 341-346. [Dipt.]

2927.—Vondráček, K. To the revision of Melichar's collection of jumping plant lice (Psylloinea). Acta Mus. morav., Brno **35** 1950 pp. 183-189, 1 pl. [Hem.]

2928.—Vornatscher, J. *Arctaphaenops angulipennis* Meixner. Der voreiszeitliche Höhlenlaufkäfer Oberösterreichs. Funde und Forschungen 1924-1949. Jb. Oberöst. Musealver., Linz **95** 1950 pp. 351-355.

2929.—Vowles, D. M. Sensitivity of ants to polarized light. Nature, London **165** 1950 pp. 282-283. [Hym.]

2930.—Voy, A. Contribution à l'étude anatomique et histologique des organes accessoires de l'appareil génital femelle chez quelques espèces d'Orthoptéroïdes. Ann. Sci. nat., Paris (11) **11** 1949 pp. 269-345, 2 pls.

2931.—Voy, A. Le pouvoir régénératrice au cours de l'intermue pré-imaginale chez le Phasme (*Carausius morosus* Br.). C.R. Acad. Sci., Paris **231** 1950 pp. 246–247. [Orth.]

2932.—Voy, A. La croissance pondérale du Phasme (*Carausius morosus* Br.) au cours des deux derniers âges larvaires et de la vie imaginaire. C.R. Acad. Sci., Paris **231** 1950 pp. 377–379. [Orth.]

2933.—Vrydagh, J. Bostrichidae (Coleoptera Teredilia). Explor. Parc nat. Albert, Miss. de Witte (1933–1935), Brussels 1950 fasc. 70 pp. 13–14.

2934.—Waddington, C. H. Genetic factors in morphogenesis. Rev. suisse Zool., Geneva **57** 1950 Suppl. 1 pp. 153–163.

2935.—Wagner, E. Neue Hemiptera-Heteroptera aus Nordafrika. Bull. Soc. Fouad 1^{er} Ent., Cairo **34** 1950 pp. 143–149, 4 figs.

2936.—Wagner, E. Die Artberechtigung von *Lygus maritimus* E. Wagn. (Hem. Het. Miridae). Ent. Ber., Amsterdam **13** 1950 pp. 87–90, 3 figs.

2937.—Wagner, E. *Globiceps novaki* n. sp., eine neue jugoslawische Miridenart (Hem. Het.). Ent. NachrBl. öst. schweiz. Ent., Vienna **2** 1950 pp. 93–95, 2 figs.

2938.—Wagner, E. Zwei neue Miridenarten aus Dalmatien (Hom. Heteropt.). Nachr. Sammelst. Schmarotzerbestimm., Aschaffenburg 1950 no. 29 pp. 5–12, 1 pl.

2939.—Wagner, E. *Plesiocoris minor* n. sp. (Hem. Het. Miridae). Opusc. ent., Lund **15** 1950 pp. 135–138, 1 fig.

2940.—Wagner, E. *Metatropis rufescens linnaeae* nov. subsp. (Hem. Het. Berytidae). Opusc. ent., Lund **15** 1950 pp. 203–205, 2 figs.

2941.—Wagner, E. *Plinthisus subcarinatus* n. sp. (Het. Lygaeidae). Wien. ent. Rdsch., Vienna **1** 1949 no. 3 pp. 11–12, 6 figs.

2942.—Wagner, E. *Capsus (Heterotoma) dalmatinus* n. sp., eine neue Miridenart aus Dalmatien. Wien. ent. Rdsch. **2** 1950 pp. 40–43, 2 figs.

2943.—Wagner, W. *Balclutha boica* n. sp., eine neue Jasside aus Bayern. Ber. naturf. Ges. Augsburg **3** 1950 pp. 97–100, 2 figs. [Hem.]

2944.—Wagner, W. Die salicicolen *Macropsis*-Arten Nord- und Mitteleuropas. Notul. ent., Helsinki **30** 1950 pp. 81–114, 14 figs. [Hem.]

Wahid Khan see Abdul Wahid Khan.

2945.—Walker, E. M. Notes on some Odonata from the Kenora and Rainy River Districts, Ontario. Canad. Ent., Guelph **82** 1950 pp. 16–21.

2946.—Wallace, B. Autosomal lethals in experimental populations of *Drosophila melanogaster*. Evolution, Lancaster, Pa. **4** 1950 pp. 172–174, 1 fig. [Dipt.]

2947.—Wallace, B. Allelism of second chromosome lethals in *D. melanogaster*. Proc. nat. Acad. Sci. U.S.A., Washington **36** 1950 pp. 654–657. [Dipt.]

Wallace, G. E. see Gahan & Wallace.

Waller, W. E. see Harper & Waller.

2948.—Wallis, J. B. A new species of *Dytiscus* Linn. (Coleoptera, Dytiscidae). Canad. Ent., Guelph **82** 1950 pp. 50–52.

2949.—Waloff, N. The egg pods of British short-horned grasshoppers (Acrididae). Proc. R. ent. Soc. London (A) **25** 1950 pp. 115–126, 10 figs. [Orth.]

2950.—Walrecht, B. J. J. R. Nieuwe aantekeningen over wolzwevers (*Bombylius*). Levende Natuur, Amsterdam **53** 1950 pp. 172–175. [Dipt.]

2951.—Walrecht, B. J. J. R. Het bouwinstinct der sociale wespen. Levende Natuur, Amsterdam **53** 1950 pp. 207–211, 5 figs. [Hym.]

2952.—Walrecht, B. J. J. R. Aantekeningen bij het artikel van der Heer R. Geurts betreffende eigenaardige nestenbouw bij wespen. Natuurh. Maandbl., Maastricht **39** 1950 pp. 16–18, 2 figs.

- 2953.—Walshe, B. M. The function of haemoglobin in *Chironomus plumosus* under natural conditions. *J. exp. Biol.*, London **27** 1950 pp. 73–95, 6 figs. [Dipt.]
- 2954.—Walshe, B. M. Observations on the biology and behaviour of larvae of the midge *Rheotanytarsus*. *J. Quakett micr. Cl.*, London (4) **3** 1950 pp. 171–178, 2 figs. [Dipt.]
- 2955.—Wanson, M. & Lebied, B. Un *Simulium nouveau du Kwango Simulium renaudi nova species*. *Rev. Zool. Bot. afr.*, Brussels **43** 1950 pp. 309–314, 4 figs. [Dipt.]
- 2956.—Wanson, M. & Lebied, B. L'habitat larvaire de *Simulium renaudi* Wanson et Lebied. Description de la pupe et des terminalia du mâle. *Rev. Zool. Bot. afr.*, Brussels **44** 1950 pp. 25–29. [Dipt.]
- 2957.—Warnecke, G. Wanderfalter 1946 und 1947 in Deutschland. *Z. Lepid.*, Krefeld **1** 1950 pp. 7–10.
- 2958.—Warnecke, G. Wanderfalter in Europa. *Z. wien. ent. Ges.*, Vienna **35** 1950 pp. 100–106. [Lep.]
- 2959.—Warren, B. C. S. Supplementary data on problems relating to Erebidae butterflies. *Entomologist*, London **83** 1950 pp. 225–230. [Lep.]
- 2960.—Watanabe, C. Charipidae of Japan (Hymenoptera). *Insecta matsum.*, Sapporo **17** 1950 pp. 85–89, 2 figs.
- 2961.—Watanabe, C. A preliminary revision of the genus *Aphrastobracon* Ashmead (Hymenoptera, Braconidae). *J. Fac. Agric. Hokkaido Univ.*, Sapporo **48** 1950 pp. 291–304, 2 figs.
- 2962.—Watanabe, C. Braconidae of Shansi, China (Hymenoptera). *Mushi, Fukuoka* **21** 1950 pp. 19–27, 1 fig.
- 2963.—Watanabe, C. A taxonomic revision of the Japanese species of Eucharidae (Hymenoptera: Chalcidoidea). [In Japanese with English summary.] *Trans. Shikoku ent. Soc.* **1** 1950 pp. 59–64, 2 figs.
- 2964.—Waterhouse, D. F. Connective tissue strands in blowfly larvae. *Aust. J. Sci.*, Sydney **13** 1950 pp. 25–26. [Dipt.]
- 2965.—Waterhouse, D. F. Studies of the physiology and toxicology of blowflies. XIV. The composition, formation, and fate of the granules in the Malpighian tubules of *Lucilia cuprina* larvae. *Aust. J. sci. Res.*, Melbourne (B) **3** 1950 pp. 76–112, 1 pl. 2 figs. 1 fldg. table. [Dipt.]
- 2966.—Waterhouse, D. F. & Paramonov, S. J. The status of the two species of *Lucilia* (Diptera, Calliphoridae) attacking sheep in Australia. *Aust. J. sci. Res.*, Melbourne (B) *Biol. Sci.* **3** 1950 pp. 310–336, 1 pl. 13 figs.
- 2967.—Waterman, T. H. Flight instruments in insects. *Amer. Sci.*, Burlington **38** 1950 pp. 222–238, 8 figs.
- 2968.—Wautier, J. Réponses de quelques invertébrés aux actions combinées de la pesanteur et d'un courant d'eau vertical. *Bull. Soc. linn. Lyon* **19** 1950 pp. 186–188, 199–201.
- 2969.—Way, M. J. The structure and development of the larval cuticle of *Diataraxia oleracea* (Lepidoptera). *Quart. J. micr. Sci.*, London **91** 1950 pp. 145–182, 3 pls. 5 figs.
- 2970.—Way, M. J. & Hopkins, B. A. The influence of photoperiod and temperature on the induction of diapause in *Diataraxia oleracea* L. (Lepidoptera). *J. exp. Biol.*, London **27** 1950 pp. 365–376, 5 figs.
- 2971.—Webb, J. E. Orthogenesis in the Anoplura. *Proc. 8th int. Congr. Ent.* Stockholm 1948, 1950 pp. 185–191, 2 figs.
- 2972.—Webb, J. E. The permeability of insect cuticle. *Symposia Soc. exp. Biol.*, Cambridge no. 3 1949 pp. 143–163, 4 figs.
- 2973.—Weber, H. H. Beitrag zur Kenntnis der Hemipterenfauna der Nordseeinsel Amrum. *Kieler Meeresforsch.* **4** 1942 pp. 109–158.
- 2974.—Weber, H. H. Ueber zwei bemerkenswerte Rüsselkäferarten von den nordfriesischen Inseln. *Schr. naturw. Ver. Schleswig-Holstein*, Kiel **23** 1942 pp. 171–175. [Col.]

- 2975.—**Weber**, N. A. The African species of the genus *Oligomyrmex* Mayr (Hymenoptera, Formicidae). Amer. Mus. Novit., New York no. 1442 1950 19 pp. 20 figs.
- 2976.—**Weber**, N. A. New Trinidad Myrmicinae, with a note on *Basiceros* Schulz (Hymenoptera, Formicidae). Amer. Mus. Novit., New York no. 1465 1950 6 pp. 1 fig.
- 2977.—**Weber**, N. A. A revision of the North American ants of the genus *Myrmica* Latreille with a synopsis of the Palearctic species. III. Ann. ent. Soc. Amer., Columbus **43** 1950 pp. 189–226, 1 fig. [Hym.]
- 2978.—**Weber**, N. A. Ants from Saipan, Marianas Islands. Ent. News, Lancaster, Pa. **61** 1950 pp. 99–102. [Hym.]
- 2979.—**Weber**, N. A. A survey of the insects and related Arthropods of Arctic Alaska. Part I. Trans. Amer. ent. Soc., Philadelphia **76** 1950 pp. 147–206, 7 pls.
- 2980.—**Weber**, N. A. & **Anderson**, J. L. Studies on Central African ants of the genus *Pseudolasius* Emery (Hymenoptera, Formicidae). Amer. Mus. Novit., New York no. 1443 1950 7 pp. 21 figs.
- 2981.—**Wehrli**, E. Die Einteilung der Gattung *Dyscia* Hbn. Ent. Ber., Amsterdam **13** 1950 pp. 77–80, 6 figs. [Lep.]
- Weiant**, E. A. see Roeder & Weiant.
- 2982.—**Weis-Fogh**, T. An aerodynamic sense organ in locusts. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 584–588, 3 figs. [Orth.]
- 2983.—**Weiss**, H. A. von. Beiträge zur Biologie und Bekämpfung wichtiger Ölfruchtschädlinge. Zur Biologie und Bekämpfung von *Ceutorhynchus assimilis* Payk. und *Meligethes aeneus* Fbr. Monogr. angew. Ent., Berlin no. 14 1940 131 pp. 54 figs. [Col.]
- 2984.—**Weiss**, H. B. & **Boyd**, W. M. Insect fcculae. J. New York ent. Soc. **58** 1950 pp. 154–165, 3 pls.
- 2985.—**Wellington**, W. G. Variations in the silk-spinning and locomotor activities of larvae of the spruce budworm, *Choristoneura fumiferana* (Clem.) at different rates of evaporation. Trans. roy. Soc. Canada. Ottawa (3) **44** 1950 pp. 89–101, 3 figs. [Lep.]
- 2986.—**Wellington**, W. G., **Fettes**, J. J., **Turner**, K. B. & **Belyea**, R. M. Physical and biological indicators of the development of outbreaks of the spruce budworm, *Choristoneura fumiferana* (Clem.) (Lepidoptera: Tortricidae). Canad. J. Res., Ottawa (D) **28** 1950 pp. 308–331, 1 pl. 10 figs.
- 2987.—**Werneck**, F. L. Os malofagos de mamíferos parte II: Ischnocera (continuação de Trichodectidae) e Rhyncophthirina. Rio de Janeiro, Inst. Oswaldo Cruz 1950 [5+] 207 pp., 316 figs.
- 2988.—**West**, A. S. The precipitin test as an entomological tool. Canad. Ent., Guelph **82** 1950 pp. 241–244.
- 2989.—**West**, L. S. The status of *Rhynchiodesia* (*Dinera*) *robusta* Curran, together with a consideration of certain cephalic and other characters useful in Muscoid taxonomy. Pap. Michigan Acad. Sci. Arts Lett., Ann. Arbor **34** (1948) 1950 pt. 2 Zool. pp. 109–117, 4 pls. [Dipt.]
- 2990.—**Westfall**, jr., M. J. Nymphs of three species of *Gomphus* (Odonata). Florida Ent., Gainesville **33** 1950 pp. 33–39, 1 pl.
- 2991.—**Wettstein**, O. Ist *Leptinus-testaceus* ein Parasit? Z. wien. ent. Ges., Vienna **35** 1950 pp. 109–111. [Col.]
- 2992.—**Weyrauch**, W. Ist der Insektenschlaf eine reflektorische Immobilisation? Zool. Anz., Leipzig **131** 1940 pp. 73–82.
- 2993.—**Wheatley**, G. A. & **Moczarski**, S. Z. An insect barrier utilizing high-frequency current. Nature, London **165** 1950 pp. 766–767, 1 fig.
- 2994.—**Wheeler**, B. M. Halogen metabolism of *Drosophila gibberosa*. I. Iodine metabolism studied by means of I^{131} . J. exp. Zool., Philadelphia, Pa. **115** 1950 pp. 83–106, 1 pl. 3 figs. [Dipt.]
- 2995.—**Wheeler**, G. C. Ant larvae of the subfamily Cerapachyinae. Psyche, Cambridge, Mass. **57** 1950 pp. 102–113, 1 pl. [Hym.]

2996.—White, M. J. D. Cytological studies on gall midges (Cecidomyiidae). Univ. Texas Publ., Austin no. 5007 1950 80 pp. 51 figs. [Dipt.]

2997.—Whitehouse, R. H. & Grove, A. J. The dissection of the cockroach. London, Univ. Tutorial Pr. Ltd. 1950 viii+73 pp. 50 figs. [Orth.]

2998.—Whiting, A. R. Absence of mutagenic action of x-rayed cytoplasm in *Habrobracon*. Proc. nat. Acad. Sci. U.S.A., Washington **36** 1950 pp. 368-372. [Hym.]

2999.—Whiting, P. W. & Starrels, R. Evidence for haploid intersexual females in *Habrobracon*. Amer. Nat., Lancaster, Pa. **84** 1950 no. 819 pp. 467-475. [Hym.]

3000.—Whittinghill, M. & Hinton, C. W. The nature of linkage variation with age in inversion heterozygotes of *Drosophila melanogaster*. Proc. nat. Acad. Sci. U.S.A., Washington **36** 1950 pp. 546-551. [Dipt.]

Whittinghill, M. see Hinton & Whittinghill.

3001.—Wick, J. A report of wing hooks on the abdomen of Mullein thrips. Proc. Iowa Acad. Sci., Des Moines **55** 1948 pp. 445-446, 1 fig. [Thysanopt.]

3002.—Wiesmann, R. Untersuchungen über die Diapause der Puppe der Kirschfliege *Rhagoletis cerasi* L. (Dipt. Trypetid.). Mitt. schweiz. ent. Ges., Berne **23** 1950 pp. 207-225, 3 figs.

3003.—Wigglesworth, V. B. The principles of insect physiology. London, Methuen & Co. Ltd.; New York, E. P. Dutton & Co. Inc. 1950 4th edn, rev. viii & 544 pp. 355 figs.

3004.—Wigglesworth, V. B. The insect epicuticle. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 307-309.

3005.—Wigglesworth, V. B. A new method for injecting the tracheae and tracheoles of insects. Quart. J. micr. Sci., London **91** 1950 pp. 217-224, 2 pls. 1 fig.

3006.—Wigglesworth, V. B. & Beament, J. W. L. The respiratory mechanisms of some insect eggs. Quart. J. micr. Sci., London **91** 1950 pp. 429-452, 1 pl. 7 figs.

Wigglesworth, V. B. see Kramer & Wigglesworth.

3007.—Wilde, J. de. Développement embryonnaire et postembryonnaire du Doryphore (*Leptinotarsa decemlineata* Say) en fonction de la température. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 310-321, 9 figs. [Col.]

3008.—Wilde, J. de. An experimental proof of the activity of the alary muscles in insects. Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 322-328, 8 figs.

3009.—Wilde, J. de & Chin, Chun-teh. Physiological problems in oligophageous insects. Acta physiol. pharmacol. neerl., Amsterdam **1** 1950 pp. 338-339.

3010.—Wille, H. P. Untersuchungen über *Psylla piri* L. und andere Birnblattsaugerarten im Wallis. Promotionsarbeit Eidg. tech. Hochsch. Zürich 1950 113 pp. 32 figs. [Hem.]

3011.—Willemse, C. *Gnathoclita vorax* (Stoll), a little known Pseudophyllid from Dutch Guiana (Orthoptera). Arthropoda, Buenos Aires **1** 1950 pp. 239-245, 2 figs.

3012.—Willemse, C. De roofvlieg *Laphria flava* L. Natuurh. Maandbl., Limburg **39** 1950 pp. 95-96, 1 fig. [Dipt.]

3013.—Willemse, C. Second addition to the knowledge of the Dermaptera and Orthoptera of the Canary Islands. Tijdschr. Ent., Amsterdam **92** (1949) 1950 pp. 248-250.

3014.—Willemse, C. Description of a new genus and species of Acridiidae (Orthoptera) from the Solomon Islands. Tijdschr. Ent., Amsterdam **92** (1949) 1950 pp. 251-255, 4 figs.

3015.—Williams, C. B. & Long, D. B. Phase coloration in larvae of Lepidoptera. Nature, London **166** 1950 p. 1035.

- 3016.—Williams, C. M. & Galambos, R. Oscilloscopic and stroboscopic analysis of the flight sounds of *Drosophila*. Biol. Bull., Lancaster, Pa., **99** 1950 pp. 300–307, 4 figs. [Dipt.]
- 3017.—Williams, F. X. The wasps of the genus *Solierella* in California (Hymenoptera, Specidae, Larrinae). Proc. Calif. Acad. Sci., San Francisco (4) **26** 1950 pp. 355–417, 11 pls. 3 figs.
- 3018.—Williams, F. X. A new species of *Diploplectron* from California, with a description of the female of *Diploplectron reticulatus* Williams (Hymenoptera: Sphecidae, Astatinae). Wasmann J. Biol., San Francisco **8** 1950 pp. 363–366, 2 figs.
- 3019.—Williams, H. B. On a hereditary abnormality in the shape of the wings in Lepidoptera. Ent. Gaz., London **1** 1950 pp. 109–112, 1 pl.
- Williams, H. B. see Haggett & Williams.
- Willink, A. see Krombein & Willink.
- 3020.—Willis, E. R. & Roth, L. M. Humidity reactions of *Tribolium castaneum* (Herbst). J. exp. Zool., Philadelphia **115** 1950 pp. 561–587, 2 figs.
- Willis, E. R. see Roth & Willis.
- Wilson, C. A. see Barnes, Fellton & Wilson.
- 3021.—Wilson, C. E. Butterflies of the northern and central Sudan. Sudan Notes, Khartoum **30** pp. 222–244, 8 pls. 1 fig. (Mem. Res. Div. Minist. Agric. Sudan no. 12.) [Lep.]
- 3022.—Wilson, jr., E. O. Notes on the food habits of *Strumigenys louisianae* Roger (Hymenoptera: Formicidae). Bull. Brooklyn ent. Soc., Lancaster, Pa. **45** 1950 pp. 85–86.
- Wilson, K. see Kaufmann & Wilson.
- 3023.—Wiltshire, E. P. Some notes on the Shatt el Arab oasis and its insects. Ent. Rec., London **62** 1950 pp. 37–40, 45–49.
- 3024.—Wing, M. W. An address list of the myrmecologists of the world. Rev. Ent., Rio de Janeiro **21** 1950 pp. 417–432.
- Winkler, E. C. see Thurman & Winkler.
- 3025.—Winkler, J. Some interesting monstrosities in Coleoptera. [In Czech with English summary.] Acta Soc. ent. Čsl., Prague **47** 1950 pp. 23–26, 4 figs., 159–162, 8 figs.
- 3026.—Wise, F. C., Ockenden, F. E. J. & Sartory, P. K. The binocular microscope. Its development, illumination and manipulation. Monogr. Quekett mier. Cl., London no. 5 1950 30 pp. 32 figs.
- 3027.—Wisselingh, T. H. van. Macrolepidoptera in 1949. Ent. Ber., Amsterdam **13** 1950 pp. 18–20.
- 3028.—Wittmer, W. Neue Malacodermata aus der Sammlung des Museo civico di Storia naturale, Genova (Coleoptera). Doriania, Genoa **1** 1950 no. 11, 11 pp. 8 figs.
- 3029.—Wittmer, W. 9. und 10. Beiträge zur Kenntnis der neotropischen Malacodermata (Col.). Rev. Ent., Rio de Janeiro **21** 1950 pp. 247–257, 2 figs., 677–688, 20 figs.
- 3030.—Wittstadt, H. Ueber den Geschlechtsduft der Schmetterlinge. Z. wien. ent. Ges., Vienna **35** 1950 pp. 81–87. [Lep.]
- Wojtusiak, R. M. see Niesiolowski & Wojtusiak.
- 3031.—Wolcott, G. N. A quintessence of sensitivity: the coffee leaf-miner. J. Agric. Univ. P.R., Rio Piedras **31** (1947) 1950 pp. 215–219. [Lep.]
- 3032.—Wolcott, G. N. The insects of Puerto Rico. J. Agric. Univ. P.R., Rio Piedras **32** (1948) 1950 pp. 1–416, illus.
- 3033.—Wolf, B. E. Die Chromosomen in der Spermatogenese der Dipteren *Phryne* und *Mycetobia*. Chromosoma, Berlin **4** 1950 pp. 148–204, 29 figs.
- 3034.—Wolff, N. L. *Crambus bonifatellus* Hulst, an unexpected component of the Lepidopterous fauna of Greenland. Ent. Medd., Copenhagen **25** 1950 pp. 421–424, 4 figs.

3035.—**Wolfram, R.** Ueber die Histogenese der Exkretpigmente bei verschiedenen Rassen von *Ptychopoda seriata* Schrk. und *Ephestia kühniella* Z. Z. indukt. Abstamm.-u. VererbLehre, Berlin **83** 1949 pp. 254–298, 16 figs. [Lep.]

3036.—**Wolfsberger, J.** Neue und interessante Macrolepidopterenfunde aus Südbayern und den angrenzenden nördlichen Kalkalpen. Mitt. münchen. ent. Ges., Munich **40** 1950 pp. 207–236.

3037.—**Wolsky, A.** Changes in the response of silkworm eggs to rotational force during cleavage. Nature, London **165** 1950 pp. 119–120. [Lep.]

Wolsky, A. see Tóth & Wolsky.

3038.—**Womersley, H.** On the female of the Dipteron *Scatopse aptera* Womersley 1942. Rec. S. Aust. Mus.; Adelaide **9** 1950 pp. 331–332, 1 fig.

3039.—**Woo, Wei-chün.** Skeleto-muscular studies on the head and feeding apparatus of *Ctenolepisma urbana* Slabaugh (Thysanura : Lepismatidae). Peking nat. Hist. Bull. **18** 1950 pp. 171–188, 2 pls.

3040.—**Woo, Wei-chun.** Studies on the bionomics of the Chinese elm beetle *Galerucella aenescens* Fairm. (Coleoptera : Chrysomelidae). Peking nat. Hist. Bull. **19** 1950 pp. 22–38, 1 fig.

3041.—**Wood, G. C.** Notes on light-collecting in Connecticut. Coleopt. Bull., Washington, D.C. **4** 1950 pp. 47–48.

3042.—**Wood, S. F.** Dispersal flight of *Triatoma* in southern Arizona. J. Parasit., Lancaster, Pa. **36** 1950 pp. 498–499. [Hem.]

Wood, S. L. see Knowlton & Wood.

3043.—**Wood-Baker, C. S.** Records of three British Aphids (Hem.). Ent. mon. Mag., London **86** 1950 pp. 270–272.

3044.—**Wood-Baker, C. S.** Variations in *Aulacorthum solani* Kalt. Nature, London **166** 1950 p. 73. [Hem.]

3045.—**Woodhill, A. R.** Further notes on experimental crossing within the *Aëdes scutellaris* group of species (Diptera, Culicidae). Proc. Linn. Soc. New South Wales, Sydney **75** 1950 pp. 251–253.

3046.—**Woodward, T. E.** Ovariole and testis follicle numbers in the Heteroptera. Ent. mon. Mag., London **86** 1950 pp. 82–84.

Woolf, C. M. see Gardner & Woolf.

3047.—**Worth, C. B.** A preliminary host-ectoparasite register for some small mammals of Florida. J. Parasit., Lancaster, Pa. **36** 1950 pp. 497–498

3048.—**Wörz, A.** Die Lepidopterenfauna von Württemberg. II. Microlepidoptera. Kleinschmettlinge. Jh. Ver. vaterl. Naturk. Württemb., Stuttgart **97–101** (1941–1945) 1949 pp. 220–254; **102–105** (1946–1949) 1950 pp. 49–64.

Woyciechowska, S. see Kryński & Woyciechowska.

3049.—**Wray, D. L.** Some new Collembola from Utah and Idaho. Bull. Brooklyn ent. Soc., Lancaster, Pa. **45** 1950 pp. 91–95, 1 pl.

3050.—**Wray, D. L.** Some new Nearctic Collembola. Psyche, Cambridge, Mass. **57** 1950 pp. 95–101, 1 pl.

3051.—**Wray, D. L., Knowlton, G. F. & Ma, S. C.** A preliminary list of Collembola of Utah. Bull. Brooklyn ent. Soc., Lancaster, Pa. **45** 1950 pp. 60–64.

3052.—**Wu, C. F.** Third–sixth supplements to the stoneflies of China (Order Plecoptera). Peking nat. Hist. Bull. **16** 1948 pp. 265–272; **17** 1948 pp. 75–80, 1 pl., 145–150, 1 pl., pp. 251–256 (1949), 2 pls.

3053.—**Wundsch, H. H.** Die Metamorphose von *Demeijereia rufipes* L. (Dipt. Tendip.). Zool. Anz., Leipzig **141** 1943 pp. 27–32, 8 figs.

3054.—**Wygodzinsky, P.** Notas y descripciones de algunas Machilidae americanas (Thysanura, Insecta). Acta zool. lilloana, Tucuman **7** (1949) 1950 pp. 593–622, 15 figs.

3055.—**Wygodzinsky, P.** Contribuciones al conocimiento de los Simuliidae argentinos. III. *Simulium dinellii* (Joan, 1912) y *Simulium wolffhügeli* (Enderlein, 1922). An. Inst. Med. reg., Tucuman **3** 1950 pp. 75–97, 15 figs. [Dipt.]

3056.—**Wygodzinsky, P.** Sobre *Bertilia valdiviana* (Philippi, 1865) (Cimicidae, Hemiptera). An. Inst. Med. reg., Tucuman **3** 1950 pp. 119–122, 2 figs.

3057.—**Wygodzinsky, P.** Sobre el género *Bergemesa* nov. (Emesinae, Reduviidae, Hemiptera). An. Soc. cient. argent., Buenos Aires **150** 1950 pp. 28–45, 58 figs.

3058.—**Wygodzinsky, P.** On the genus *Mirambulus* Breddin, 1901, with general notes on the subfamily Vesciinae (Reduviidae, Hemiptera). Ann. Mag. nat. Hist., London (12) **3** 1950 pp. 265–268, 1 fig.

3059.—**Wygodzinsky, P.** Sobre el género *Palacus* Dohrn, 1863 (Emesinae, Reduviidae, Hemiptera). Bol. Ent. venezol., Caracas **8** (1949) 1950 pp. 103–114, 22 figs.

3060.—**Wygodzinsky, P.** Reduviidea from New South Wales. Notes and descriptions (Hemiptera). Proc. Linn. Soc. New South Wales, Sydney **75** 1950 pp. 81–88, 34 figs.

3061.—**Wygodzinsky, P.** Schizopterinae from Angola (Cryptostematidae, Hemiptera). Publ. cult. Mus. Dundo, Comp. Diam. Angola, Lisbon no. 7 1950 pp. 9–47, 208 figs.

3062.—**Wygodzinsky, P.** Sôbre alguns Emesinae (Reduviidae, Hemiptera). Rev. bras. Biol., Rio de Janeiro **10** 1950 pp. 73–84, 47 figs.

3063.—**Wygodzinsky, P.** Contribution towards the knowledge of the Emesinae (Reduviidae, Hemiptera). Rev. bras. Biol., Rio de Janeiro **10** 1950 pp. 241–251, 60 figs.

3064.—**Wygodzinsky, P.** Contribution towards the knowledge of the family Cryptostematidae (Hemiptera). Rev. bras. Biol., Rio de Janeiro **10** 1950 pp. 377–392, 71 figs.

3065.—**Wygodzinsky, P. & Abalos, J. W.** *Triatoma guasayana* Wygodzinsky y Abalos, 1949, con notas sobre

especies vecinas (Triatominae, Reduviidae, Hemiptera). An. Inst. Med. reg., Tucuman **3** 1950 pp. 53–73, 11 figs.

3066.—**Wygodzinsky, P. & Abalos, J. W.** Sobre algunos *Stenolemus* americanos (Emesinae, Reduviidae, Hemiptera). An. Inst. Med. reg., Tucuman **3** 1950 pp. 99–110, 4 figs.

3067.—**Wygodzinsky, P. & Abalos, J. W.** *Triatoma guasayana* sp. n. (Triatominae, Reduviidae, Hemiptera). Semana méd. Suppl. B **56** 1949 p. 2. [Not seen.]

Wyrwalski, T. see Świechowska & Wyrwalski.

3068.—[**Yakhimovich, L. A.**] Changes in environmental requirements of the Asiatic locust during embryonic development. [In Russian.] C.R. Acad. Sci. URSS, Moscow (N.S.) **73** 1950 pp. 1105–1108. [Orth.]

Yakhimovich, L. A. see Shumakov & Yakhimovich.

Yano, S. see Miyatake & Yano.

3069.—**Yao, T.** Cytological studies in the embryonic development of *Drosophila melanogaster* II. Alkaline and acid phosphatases. Quart. J. micr. Sci., London **91** 1950 pp. 79–88, 2 pls. [Dipt.]

3070.—**Yao, T.** The localization of alkaline phosphatase during the post-embryonic development of *Drosophila melanogaster*. Quart. J. micr. Sci., London **91** 1950 pp. 89–105, 4 pls. [Dipt.]

3071.—**Yasumatsu, K.** Discovery of an ant of the genus *Lordomyrmex* Emery in eastern Asia (Hym.). Insecta matsum., Sapporo **17** 1950 pp. 73–79, 2 figs.

3072.—**Yasumatsu, K.** On the identity of four Scelionid egg-parasites of some Japanese and Formosan Pyraloid moths (Hymenoptera). Mushi, Fukuoka **21** 1950 pp. 55–60.

3073.—**Yasumatsu, K.** Vespoidea of Micronesia. 3. *Timulla (Trogaspidia) esakii* sp. n. Pacific Sci., Honolulu **4** 1950 pp. 116–117. [Hym.]

3074.—**Yasumatsu, K. & Hirashima, Y.** Revision of the genus *Osmia* of Japan and Korea (Hymenoptera : Megachilidae). *Mushi, Fukuoka* **21** 1950 pp. 1–18, 3 pls.

3075.—**Yeager, J. F. & Munson, S. C.** Blood volume of the roach *Periplaneta americana* determined by several methods. *Arthropoda, Buenos Aires* **1** 1950 pp. 255–265, 1 fig. [Orth.]

Yofe, J. see Leeson, Lumsden, Yofe & Macan.

3076.—**Yosida, T.** Some observations on abnormal nuclear divisions in grasshopper testes treated with colchicine. (Studies on abnormal nuclear divisions.) *J. Fac. Sci. Hokkaido Univ. Sapporo (Zool.)* **10** 1950 pp. 61–70, 26 figs. [Orth.]

Youden, G. H. see Embry & Youden.

3077.—**Young, F. N.** Two new species of *Bidessus* from the Apalachicola flatwoods of Florida (Coleoptera, Dytiscidae). *Occ. Pap. Mus. Zool. Univ. Michigan, Ann Arbor* no. 526 1950 6 pp., 2 figs.

3078.—**Young, F. N.** Notes on the habits and habitat of *Geotrupes chalybaeus* LeConte in Florida. *Psyche, Cambridge, Mass.* **57** 1950 pp. 88–92. [Col.]

3079.—**Zaćwilichowska, K.** The sensitive nervous system and the sense organs of the naked clothes-moth caterpillar *Tineola biselliella* Hummel. *Bull. int. Acad. Cracovie* **1949** BII 1950 pp. 337–365, 10 figs. [Lep.]

3080.—**Zangheri, P.** Fauna di Romagna. Ditteri. 2^a parte. *Mem. Soc. ent. ital., Genoa* **29** 1950 pp. 68–95.

3081.—**Zavřel, J.** Ein merkwürdiger Fall von Polypodie bei Insektennuppen (vorläufige Mitteilung). *Zool. Anz., Leipzig* **139** 1942 pp. 208–212. [Dipt.]

3082.—[**Zekhnov, M. I.**] Adaptive phenomena in the multiplication of *Mallophaga* of the jackdaw (*Coloeus monedula* L.). [In Russian.] *Zool. Zh., Moscow* **29** 1950 pp. 478–480, 2 figs.

3083.—[**Zhivković, V.**] Contribution to the knowledge of the Phlebotominae of Jugoslavia. Part V. *Phlebotomus sergenti* Parrot, 1917, in Serbia. [In Serbian.] *Glas srpske Akad. Nauka, Odel. med. Nauka, Belgrade* **197** 1950 pp. 147–151. [Dipt.]

3084.—[**Zhivković, V.**] Contribution to the knowledge of the fauna of our Phlebotominae. Part V. Eastern, western and northern Serbia. [In Serbian.] *Glas srpske Akad. Nauka, Odel. med. Nauka, Belgrade* **197** 1950 pp. 153–168. [Dipt.]

Zhivković, V. see Simić & Zhivković.

Ziegler, J. B. see Rawson & Ziegler.

3085.—**Ziegler, O.** Die Bedeutung des Windes und der Thermik für die Verbreitung der Insekten, namentlich der grünen Pfirsichblattlaus. *Z. Pflanzenb., München* **1** 1950 pp. 241–266, 12 figs. [Hem.]

3086.—**Zilahi-Sebess, G. v.** Bestimmungstabelle der *Culicoides*-Weibchen. [In Magyar with German summary.] *Folia ent. hung., Budapest* **6** 1941 pp. 31–36, 1 fig. [Dipt.]

Zimmering, S. see Spassky, Zimmering & Dobzhansky.

3087.—**Zimmerman, E. C. & Bradley, J. D.** A new genus and species of Elachistidae mining *Lonicera* leaves in Hawaii (Lepidoptera). *Proc. Hawaii. ent. Soc., Honolulu* **14** (1949) 1950 pp. 191–196, 5 figs.

3088.—**Zimmermann, S.** Zwei neue Arten der Gattung *Spintharis* Dahlb. (Hymenopt., Chrysidae) aus Nordafrika nebst Bemerkungen über die Gattungen *Spintharis* Dahlb. und *Spintharina* Sem. *Ann. naturh. Mus. Wien* **57** (1949–1950) 1950 pp. 314–323, 2 figs.

3089.—**Zimmermann, S.** Chrysidae (Hymenoptera Apocrita). Explor. Parc nat. Albert, Miss. de Witte (1933–1935), Brussels 1950 fasc. 70 pp. 27–28.

Zimmermann-Gries, S. see Rivnay & Zimmermann-Gries.

3090.—**Zinner, E.** Neue Angaben über das Verhalten der Tiere bei Sonnenfinsternissen. Ber. naturf. Ges. Bamberg no. 32 1950 pp. 35–50.

3091.—**Živojinović, S.** Les Scolytes de la montagne Golija. [In Serbian with French summary.] Glasn. Shumarskog Fak. (Bull. Coll. Forestry), Belgrade **1** 1950 pp. 299–310, 6 pls. [Col.]

3092.—**Živojinović, S.** La faune des insectes du domaine forestier de Majdanpeh (monographie entomologique). [In Serbian with French summary.] Monog. R. Acad. Serb., Belgrade Sect. Sci. mat. nat. no. 160 1950 262 pp. 15 pls. 1 map.

3093.—**Zollinger, E.** Ein strukturell homozygoter Stamm von *Drosophila subobscura* aus einer Wildpopulation. Arch. Klaus-Stift. VererbForsch. Zürich **25** 1950 pp. 33–35. [Dipt.]

3094.—[**Zolotarev, E. Kh.**] Regulation of the voltinism of the oak silkworm through the action of ecological factors. [In Russian.] Dokl. vsesoyuzn. Akad. sel'skokhoz. Nauk Lenina **15** 1950 no. 4 pp. 20–22. [Lep.]

3095.—[**Zolotarev, E. Kh.**] On the development of the larvae of *Aporia crataegi* L. during the period of hibernation. [In Russian.] Zool. Zh., Moscow **29** 1950 pp. 152–158. [Lep.]

Zubikowa, I. see Heller, Karpiak & Zubikowa.

3096.—**Zuidema, H. P.** A new fossil insect and plant locality in Montana. Pap. Michigan Acad. Sci. Arts Lett., Ann Arbor **34** (1948) 1950 pt. 2 Zool. pp. 119–123, 4 pls.

3097.—**Zumpt, F.** Key to the Stomoxydinae of the Ethiopian region, with description of a new *Haematobia* and a new *Rhinomusca* species from Zululand. An. Inst. Med. trop., Lisbon **7** 1950 397–426, 7 figs. [Dipt.]

3098.—**Zumpt, F.** Ectoparasites of bats from the Sterkfontein caves, Transvaal. J. ent. Soc. sthn Africa, Pretoria **13** 1950 pp. 87–98, 5 figs.

3099.—**Zumpt, F.** Descriptions of three new *Sarcophaga* species from

the Ethiopian region (Diptera, Calliphoridae). Proc. R. ent. Soc. London (B) **19** 1950 pp. 80–84, 3 figs.

3100.—**Zumpt, F.** Further notes and descriptions of *Sarcophaga* species from the Ethiopian region (Diptera : Calliphoridae). Proc. R. ent. Soc. London (B) **19** 1950 pp. 162–173, 6 figs.

3101.—**Zumpt, F.** & **Heinz, H. J.** Studies in the sexual armature of Diptera. II. Ent. mon. Mag., London **86** 1950 pp. 207–216, 13 figs.

Zur Strassen see Strassen.

II.—SUBJECT INDEX.

N.B.—The full reference may be obtained from "Titles" by means of the Author's name and number.

GENERAL. TEXTBOOKS, TREATISES.

CRAIGHEAD and others, Insect enemies of eastern forests, **658**; **DEMEREK** [Ed.], Biology of *Drosophila*, **730**; **EBELING**, Subtropical entomology, **823**; **HANSEN**, Korchs atlas over danske biller, **1193**; **HENNIG**, Grundzüge einer Theorie der phylogenetischen Systematik, **1276**; **HERMS**, Medical entomology, 4th ed., **1285**; **HORION**, Käferkunde für Naturfreunde, **1356**; **KALSHOVEN**, De plagen van de cultuurgewassen in Indonesië Deel, I, **1518**; **KOESEL**, Nutztierparasitologie, **1611**; **KÜHNELT**, Bodenbiologie, **1652**; **MATTHESON**, Medical Entomology, 2nd ed., **1918**; **MORETON**, Guide to British insects, an aid to identification, **2006**; **PAVLOVSKI & VINOGRADOV**, Animal world of USSR, vol. 2, desert zones, **2193**; **SAALAS**, The forest insects of Finland, **2411**; **SÉGUY**, La biologie des Diptères, **2532**; **SWAIN**, The Insect Guide. Orders and major families of North American insects, **2704**; **WHITEHOUSE & GROVE**, Dissection of the cockroach, **2997**; **WIGGLESWORTH**, the principles of insect physiology, 4th edn., rev., **3003**.

HISTORICAL.

ANDER, entomology in Lund, **47**; **HOEPLI & CH'IANG**, parasites in Chinese and early Western medicine, **1327**.

BIOGRAPHY.

- ADAMEK, by Kudla, Acta Soc. ent. Csl. **47** pp. 72-73; ADAMS, by Sabrosky, Ent. News **61** p. 14; J. econ. Ent. **43** p. 574; ALLUAUD, Bull. Soc. ent. Fr. **54** p. 145; by Kocher, C.R. Soc. Sci. nat. Maroc **16** p. 33; AMOS, By Manson-Bahr, Nature **166** p. 422; ANNAND, by Morrison, Ann. ent. Soc. Amer. **43** p. 460; Mosq. News **10** p. 93; ARROW, by Srivastava, Indian J. Ent. **10** pp. 288-289; AVINOFF, by Shoumatoff, Lep. News **4** pp. 7-9, 2 photos; BARBER, by Snyder, Coleopt. Bull. **4** pp. 51-54, 1 photo; by Wade & Pepper, J.N.Y. ent. Soc. **58** pp. 55-59, 1 photo; Proc. ent. Soc. Wash. **52** pp. 259-269, 4 photos; BELLIO, by Lupo, Boll. Lab. Ent. agr. Portici **9** 1949 pp. 111-113, 1 photo; BONDY, J. econ. Ent. **43** p. 574; BREWER, J. econ. Ent. **43** p. 963; BRIDAROLLI, by Williner, pp. 253-262, by Orfila, pp. 329-330, 1 photo, Rev. Soc. ent. argent. **14**; BUITENDIJK, by Boschma, Ent. Ber., Amst. **13** pp. 177-178; BURNSIDE, by Sturtevant, J. econ. Ent. **43** p. 113, 1 photo; CRAIG, J. econ. Ent. **43** p. 965; DAMPF, by Vogelsang, Bol. Ent. venezol. **8** pp. 129-130, 1 photo; DEBORD, by Heinrich, Muesebeck & Russell, Proc. ent. Soc. Wash. **52** pp. 157-158; DESPAX, Bull. Soc. ent. Fr. **55** p. 49; EDDY, J. econ. Ent. **43** p. 573; EIDMANN, by Brown, Ent. News **60** p. 262; by Wing, J.N.Y. ent. Soc. **58** pp. 130-131; FAHRENHOLZ, by Eichler, **838**; FASSNIDGE, by W.P.C., J. Soc. Brit. Ent. **3** pp. 187-188, 1 photo; FRANK, by Reisser, Z. wien. ent. Ges. **35** p. 123; FRYER, by Edelstein (pp. 95-104), by Ogg (p. 104), Obit. Not. roy. Soc. London **7** no. 19, 1 photo; GADDIS, by Annand & Richmond, J. econ. Ent. **43** pp. 571-572, 1 photo; A. D. HALL, by Thompson, Canad. Ent. **81** p. 304; HANSSEN, by Strand, Norsk ent. Tidsskr. **8** pp. 136-138, 1 photo; HERMS, Mosq. News **10** pp. 92-93, 1 col. photo; HOPKINS, by Leefmans, Ent. Ber., Amst. **13** p. 47; by Rohwer, Proc. ent. Soc. Wash. **52** pp. 21-26, 1 photo; HORN, by Kaszab, Folia ent. hung. **6** 1941 pp. 1-3, 1 photo; HOWARD, J. econ. Ent. **43** pp. 958-962, 1 photo; by W[eiss], J.N.Y. ent. Soc. **58** p. 87; Mosq. News **10** p. 92, 1 photo; by Wade, Nature **166** pp. 460-461; Proc. ent. Soc. Wash. **52** pp. 224-233, 1 photo; ILLINGWORTH, by Bryan, Proc. Hawaii. ent. Soc. **14** p. 21; IMMS, by Barnes, Ann. appl. Biol. **37** pp. 553-554; by Vappula, Ann. ent. fenn. **16** pp. 89-90, 1 photo; F. P. JEPSON, Trop. Agric. **106** p. 130; KITTO, by Thompson, Canad. Ent. **81** p. 304; KOTZSCH, by Ryszka, Ent. NachrBl. öst. schweiz. Ent. **2** pp. 79-80, 1 photo; LA FERLA, by Roberti, Boll. Lab. Ent. agr. Portici **9** pp. 76-77, 1 photo; LHOMME, by Bourgogne, Entomologiste **5** pp. 61-52; Z. wien. ent. Ges. **35** p. 40; MACHULKA, Acta Soc. ent. Csl. **47** pp. 3-5, 1 photo; by Klapperich, Col. Bull. **4** p. 20; MAIN, by B[air], Proc. S. Lond. ent. nat. Hist. Soc. **1948-49** p. xxxix, 1 photo; MALENOTTI, by del Cañizo, Bol. Pat. veg. Ent. agric., Madrid **17** pp. 303-305, 1 photo; MARCHAL, by Caulery, Proc. Linn. Soc. Lond. **162** pp. 106-108; J. F. MARSHALL, by Shute, Nature **165** pp. 16-17; MASON, by Hadley & McBride, J. econ. Ent. **43** p. 964, 1 photo; MAULIK, by Bairstow, Ent. mon. Mag. **86** pp. 225-226, 1 photo; by Bairstow, Nature **166** pp. 422-423; MORGAN, J. econ. Ent. **43** pp. 964-965, 1 photo; MORRIS, by Walker, Canad. Ent. **82** pp. 90-92; NICOLAY, by Tulloch, Bull. Brooklyn ent. Soc. **45** p. 82; by Blackwelder, Coleopt. Bull. **4** pp. 33-36, 1 photo; by Weiss, J.N.Y. ent. Soc. **58** pp. 95-97; d'ORCHYMONT, by Collart, Bull. Inst. Sci. nat. Belg. **26** 1950 no. 37, 20 pp., 1 photo; OTTO, Z. wien. ent. Ges. **35** p. 124; PAILLOT, Rev. Zool. agric., Gironde **46** (1947) 1949 pp. 1-15, 1 photo; PELLERANO, by Liebermann, Rev. Soc. ent. argent. **14** pp. 330-332; van PELET LECHNER, by Lempke, Ent. Ber., Amst. **13** pp. 65-66; PEYRON, by Tullgren, Ent. Tidskr. **71** pp. 15-16, 1 photo; PIERRE, Bull. Soc. ent. Fr. **55** p. 49; PILlich, by Csiki, Folia ent. hung. (N.S.) **3** 1949 pp. 17-22; POUSSIÈGUE, Bull. Soc. ent. Fr. **55** p. 17; ROSSI, Boll. Soc. ent. ital. **80** p. 66; SAGEDER, Z. wien. ent. Ges. **35** p. 124; SCHATZMAYR, Boll. Soc. ent. ital. **80** p. 66; SCHMIDT, by Alexander, Ent. News **60** pp. 261-262; SCHULZE, by Hase, Z. Parasitenk. **14** pp. 423-

425, 1 photo; SEPPÄLÄ, by A.N., Notul. ent., Helsinki **30** pp. 114–115; SILVESTRI, by Jannone, **1432**; by Kanervo, Ann. ent. fenn. **16** pp. 25–26, 1 photo; by De Dominicis, Ann. Fac. agr. Portici (3) **17** 1949 pp. i–xvii, 1 photo; by Rosas Costa, Arthropoda, Buenos Aires **1** pp. 384–386; by Russo, Boll. Lab. Ent. agr. Portici **9** 1949 pp. i–x, 1 photo; by Novicky, Ent. NachrBl. öst. schweiz. Ent. **2** pp. 64–67, 1 photo; by Chou, Ent. sinica **3** 1949 4 pp.; by Carpenter, Proc. Linn. Soc. Lond. **162** pp. 110–113; by Orfila, Rev. Soc. ent. argent. **14** pp. 321–326; by Russo, Rev. Parassit. **11** pp. 1–5, 1 photo; R. N. SINGH, by Lal, Indian J. Ent. **10** pp. 289–291, 1 photo; C. I. SMITH, by Hurd, Pan-Pacif. Ent. **26** pp. 59–60; TESTOUT, Rev. franç. Lép. **12** p. 288; Tosi, Boll. Soc. ent. ital. **80** p. 18; VILLENEUVE DE JANTI, by Mesnil, Bull. Inst. Sci. nat. Belg. **26** no. 7 pp. 1–7, 1 photo; by Mesnil, Bull. Soc. Sci. nat. Seine-et-Oise (3) **8** 1946 pp. 25–29; VORHIES, by Wehrle, J. econ. Ent. **43** p. 573, 1 photo; WAGNER, by Klapperich, Col. Bull. **4** p. 20; WATERHOUSE, by Walkom, Nature **166** pp. 335–336; L. P. WEHRLE, by H. J. Wehrle, J. econ. Ent. **43** p. 963, 1 photo; WEST, by Lindroth, Ent. Tidskr. **71** p. 79; WILDING, by Harwood, Ent. mon. Mag. **86** p. 95; WRIGHT, Entomologist **83** pp. 167–168; YETTER, by List & Allen, J. econ. Ent. **43** p. 962; ZIKAN, by Orfila, Rev. Soc. ent. argent. **14** p. 332.

BIBLIOGRAPHY.

Current entomological literature, **6**; Current Coleoptera literature, ARNETT Coleopt. Bull. **4** pp. 60–64; BEIRNE, original paintings by J. Abbot, Lep. News **4** pp. 25–26; BENICK, Coleoptera of Nordelbingen, **241**; BLACKWELDER, index to beetle families in "Biol. centr.-amer.", **311**; BORGMEIER, Neotropical fauna, Rev. Ent., Rio de J. **21** pp. 404–416, 693–696; BREUNING, on Longicorns, **403**; CLARK, Dyar's "A List of North American Lepidoptera" published 13th Jan., 1903, Proc. ent. Soc. Wash. **52** p. 308; CLAY & HOPKINS, early literature on Mallophaga, 1758–1762, **591**; COE, M. Harris "Exposi-

tion of English insects" 1776, discussion of plates, **600**; CORPORAAL, Gay "Hist. Chile" legends to pls. 9 and 10 in Vol. 4 reversed, **643**; CURLE, Arcana entomologica, Index Entomologicus, corrigenda to article in 1949, J. Soc. Bibliogr. nat. Hist. **2** p. 225; EICHLER, suppl. 1 to Kéler's Mallophaga, **837**; GRESSITT, on Longicorns, **1118**; HIGGINS, "Zoophylacium Gronovianum" 1781 and Meuschen's index, **1298**; HOFENEDER, bibliography of Strepsiptera (Col.) attracted to light, **1329**; SABROSKY, James' "The flies that cause myiasis in man" published 13 Feb. 1948, not 1947, Proc. ent. Soc. Wash. **52** p. 315; SKALA, works on Lep., **2573**; VAPPULA, Finnish literature, 1948, **2855**; WEISS, some early scientific journals that carried entomological papers, J.N.Y. ent. Soc. **58** p. 4.

Works of: ADÁMEK, by Kudla, Acta Soc. ent. Čsl. **47** p. 73; ALLUAUD, by Kocher, C.R. Soc. Sci. nat. Maroc **16** pp. 33–34; BARBER, by Blackwelder, Coleopt. Bull. **4** pp. 55–59; (from 1918–1949), by Wade, J.N.Y. ent. Soc. **58** pp. 61–68; BELLIO, Boll. Lab. Ent. agr. Portici **9** 1949 pp. 113–114; BUITENDIJK, by Boschma, Ent. Ber. Amst. **13** p. 178; CHRÉTIEN, by Viette, Rev. franç. Lép. **12** pp. 250–256, 282–288; FAHRENHOLZ, by Eichler, **838**; FRYER Obit. Not. roy. Soc. London **7** no. 19 pp. 105–106; HANSSEN, by Strand, Norsk ent. Tidsskr. **8** p. 138; JEDLIČKA, Acta Soc. ent. Čsl. **47** pp. 68–72; LA FERLA, by Roberti, Boll. Lab. Ent. agr. Portici **9** p. 77; MACHULKA, Acta Soc. ent. Čsl. **47** pp. 5–6; NICOLAY, by Blackwelder, Coleopt. Bull. **4** pp. 36–37; D'ORCHYMONT, by Collart, Bull. Inst. Sci. nat. Belg. **26** 1950 no. 37 p. 7; SILVESTRI, by Russo, Boll. Lab. Ent. agr. Portici **9** 1949 pp. xi–xlix; (published in Argentina), Rev. Soc. ent. argent. **14** p. 326; publications on parasites, by Russo, Rev. Parassit. **11** pp. 5–11; VILLENEUVE DE JANTI, by Mesnil, Bull. Inst. Sci. nat. Belg. **26** no. 7 pp. 8–22; by Mesnil, Bull. Soc. Sci. nat. Seine-et-Oise (3) **8** 1946 pp. 29–30.

TAXONOMY.

BERTHOLDI, species and lower units, Espéc. e unid. tax. (published

by the author), Pelotas 1946 4 pp.; BROWN, measurements of Lep., 423; role of morphology in systematics, 424; BRYK, Linnaeus' concept of the genus, 451; CREIGHTON, history of taxonomy of N. American ants, 659; CROWSON, classification of famm. of British Coleoptera, 667; CURTIS, and ecology, 671; HENNIG, main features of a theory of phylogenetic systematics, 1276; PACLT, transliteration of cyrillic names, 2142; SCHILDER, new classification of Lep., 2482; STERZL, definitions of terms, 2654; VAN DER VECHT, 2872.

NOMENCLATURE.

Memoranda and reports submitted to 13th Internat. Congress of Zool., Paris 1948, and the official record of proceedings, 1, 3; Communications submitted to, reports submitted by, and official record of Section of Nomenclature, 13th Internat. Congress of Zool., Paris, 1948, 2, 4, 5; ALLAN, criticism of Pacit's interpretation of gender of *Colias* and *Ochlodes*, Entomologist 83 pp. 45-46, 60; ARNETT, Oedemeridae, type spp., 64; BALFOUR-BROWNE, GRENSTED, orthography of trivial names, Ent. mon. Mag. 86 p. 254; BRINCK, 408; COLLIN in COE, 600; DAMMERMAN, request to Int. Comm. to conserve *geoffroyi* as type of *Scolytus* and place *Myelophilus* on Official List, 676; continuity versus priority, 677; DIAKONOFF, type specimens of certain Oriental Eucosmidae and Carposinidae described by Meyrick, 750; FERREIRA D'ALMEIDA, additions and corrections to the types of Lep., 910; FIELD, correct name for N. American monarch butterfly, 923; FRANCLEMENT, proposal to Int. Comm. on Linnaean subgeneric names of *Phalaena* (Lep.), 969; GRENSTED, genders of *Piesma*, *Prostemma* and *Rutidosoma*, Ent. mon. Mag. 86 p. 266; HEIKERTINGER, 1259; HELLÉN, Ichneumonidae (Hym.) types of Woldstedt, 1269; HEMMING, 1274; HOPKINS, *Trichopsylla* (Siphonapt.) proposed application to Int. Comm. for suppression, 1352; JACZEWSKI, types of Corixidae lost in 1944 in Polish Museum of Zoology, 1412; KONTUNIEMI, exchange of insect types between

museums, 1620; NEAVE, Nomenclator zool., Vol. 5 (1936-1945), 2060; VIETTE, designation of type specimens of Guenée's Geometridae in Mus. Hist. nat. Paris, 2894.

COLLECTIONS.

Some German Collections, Z. wien. ent. Ges. 35 p. 35; BENOIST, honey bees, in Lab. Ent. Mus. Paris, Bull. Soc. ent. Fr. 55 p. 97; Box, *Diatraea* (Pyral.) in Cornell Univ., 377; CASEY Coleoptera in U.S. nat. Mus., Col. Bull., Washington, D.C. 4 pp. 65-80 figs.; DESPAX, Plecoptera in Lab. Ent. Mus. Paris, Bull. Soc. ent. Fr. 55 p. 97; FOCARILE collection of Carabidae (Col.) in Mus. comp. Zool. Harvard, Psyche 57 p. 116; A. D. HALL'S collection to Agric. Coll. Truro, Canada, Canad. Ent. 81 p. 304; HINCKS, Spaeth's collection of Cassidinae in Manchester Museum, 1311; part of C. A. HUBBARD's flea collection in California Acad. Sci., Pan-Pacif. Ent. 26 p. 79; C. A. HUBBARD's fleas of Pacific northwest in Mus. comp. Zool. Harvard Univ., by Bequaert, Psyche 57 p. 44; KERRICH, Ichneumonids in Spinola Collection, Turin, 1557; W.V. KITTO's collection in R. Ontario Mus. Zool., Canad. Ent. 82 p. 83; KRUSEMAN, wrong localities on labels, Ent. Ber., Amst. 13 p. 155; O'FARRELL, J.J.F.X. King collection of British Odonata, 2107; PINHEY, at Coryndon Museum, Kenya, Nature E. Africa (2) no. 3 p. 9; RILEY, Rothschild-Cockayne-Kettlewell British Lep., 2350; Ross, D. Moulton's Thysanoptera, Hewes' Lepidoptera, Maehler's Coleoptera, Hubbard index collection of Nevada fleas in California Acad. Sci., Pan-Pacif. Ent. 26 p. 106; UHMANN, location of some Hispid holo- and allotypes, 2821; VILLIERS, types placed in Mus. Hist. Nat. Paris by Inst. franç. Afrique Noire, 2909.

SALES: T. GREER, Ent. Rec. 62 pp. 43-44.

TECHNIQUE: COLLECTING AND PRESERVATION.

BALACHOWSKY & GOSSELIN, Coccids, Aphids, 105; BEGG & SANG, *Drosophila* eggs, collecting and sterilising, 218; BENSON, sawflies, 259; BERG, Chironomids, 263; BERTRAND,

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TECHNIQUE : BREEDING AND EXPERIMENTAL.

ANDUIZA, preparing Lepidoptera for study, 52; ARNASON, FULLER & SPINKS, electronic method of tracing movements of soil-inhabiting spp., 61; AUCLAIR & MALTAIS, extraction

of plant juice by paper partition chromatography, 77; BALDUF, determining weight of food ingested by *Sinea diadema* (Hem. Reduv.), 108; BECK & STAUFFER, *Pyrausta nubilalis* (Lep. Pyral.), aseptic method of rearing larvae, 210; BEGG & ROBERTSON, *Drosophila melanogaster*, aseptic culture, 217; BEGG & SANG, *Drosophila* eggs, collecting and sterilising, 218; BERRY & PARKER, rearing and shipping parasites of *Sitona* (Col. Curc.), 281; BERTRAND, Col., aquatic spp., 283; BONNET, *Aedes* (Dipt., Culic.), hybridisation, 349; BRAUN, leaf-mining Lep., 387; BUTLER, queen honey-bees, microsyringe tip for insemination, 479; CERRUTI, Coleoptera, 542; CHAMBERLAIN & SIKES, safe handling of mosquitoes for virus transmission experiments, 544; CHAUVIN, studying ecology, 549; DARBOIS, *Gryllus* (Orth.), eggs, 686; VAN EMDEN, Adelognatha (Col. Curc.) breeding, 856; EVANS, care of larvae in diapause, 888; FEIJÓ COLAÇO, breeding *Phlebotomus* (Dipt., Psychod.), 903; FINNEY, *Chrysopa californica* (Neur.), mass culturing, 927; FISHER & MORRISON, *Musca domestica* (Dipt.) rearing and sexing, 931; FLANDERS, culture of entomophagous insects, 935; GOMES & GONÇALVES, *Trichogramma minutum* (Hym.), rearing, 1071; GROSCH, olfactometer experiments with male Braconids (Hym.), 1131; HARRISON, *Musca domestica* (Dipt.), modifications in Peet-Grady method, 1233; VAN HEERDT, small grading temperature apparatus, 1254; JOHNSON, comparison of suction trap, sticky trap and tow-net for quantitative sampling of small airborne insects, 1482; KENNEDY & BOOTH, *Aphis fabae* (Hem.), mass rearing, 1551; KLATT, *Lymantria dispar* (Lep.), 30 years of inbreeding, 1591; KRYŃSKI & WOYCIECHOWSKA, Anoplura, intrarectal injections, 1649; MAKINO & MOMMA, Orth., spiral structure in chromosomes, 1874; MARUCCI & CLANCY, artificial culture of fruit flies and their parasites, 1915; MITTELSSTAEDT, apparatus for studying flight of Odonata, 1979; MOREE, *Drosophila* and other insects, apparatus for study of population models, 2005; MUSGRAVE, fluorescein to mark visiting bees, 2043; NÁJERA, breeding

chamber for *Phlebotomus* (Dipt., Psychod.), 2048; NIELSEN & GREVE, swarming of Nematocera, 2070; O'ROURKE, formic acid estimation in ants, 2130; PAVAN, apparatus for studying taxes, 2191; PETERSEN, studies on Batesian mimicry, 2209; PIC, rearing Coleoptera living in wood, 2229; PICK, *Aedes aegypti* (Dipt., Culic.), eggs on silica-gel, 2243; POST & ANDERSON, lacquers and water colours for marking insects, 2277; ROBERTS, *Culicoides nubeculosus* (Dipt. Ceratopog.), artificial feeding in laboratory, 2370; ROBINSON, prophylactic methods, 2373; ROTH & WILLIS, *Dermestes ater* (Col.), 2396; SACKTOR, spectrophotometric technique, 2426; SCHIAVI & FRANCO, mosquitos, fed on blood and honey, 2481; SCHILDMACHER, Culicids (Dipt.), methods for studying feeding and nutrition, 2483; SESAGIRI RAO, olfactometer, 2543; SKAIFE, artificial nesting sites for solitary bees, 2572; SPENCER in DEMERECK, *Drosophila*, laboratory culture, 730; STEEL, *Gnatocerus cornutus* (Col. Tenebr.), media, Ent. mon. Mag. 86 p. 273; STEINER, experiments in scent attraction, 2641; SURÁNYI, leaf miners, 2700; SWEENEY, constructing a formicarium, 2707; WEST, precipitin test, 2988; WHEATLEY & MOCZARSKI, insect barrier using high-frequency current, 2993; WILLIS & ROTH, olfactometer for studying flour beetles, 3020; YEAGER & MUNSON, determining blood volume of cockroach, 3075.

TECHNIQUE : ANATOMICAL.

DARBOIS, *Gryllus* (Orth.), studying chorion, 686; EICHLER & MÜLLER, phase-contrast microscopy and parasites, 843; HUBER & HAASSER, *Dixippus morosus* (Orth., Phasm.), electron-microscope study of peritrophic membrane, 1369; KRIEGLSMAN, DRESDEN & BERGER, *Periplaneta americana* (Orth., Blatt.), isolated heart, 1638; PALM, vital staining methods in histological research, 2146; RICHARDS & KORDA, tracheae examined by electron microscope, 2344; WHITEHOUSE & GROVE, dissection of cockroach, 2997; WIGGLESWORTH, injecting tracheal system, 3005; WISE, OCKENDEN

& SARTORY, the binocular microscope, 3026.

TECHNIQUE : ILLUSTRATION.

BEISCHER, electronic radiography by transmission 231; DRESCO, photographing insects in nature, Entomologiste 5 pp. 48-56; STEYSKAL, easy way to make drawings, 2656; THÉVENARD, radiography for studying metamorphosis, 2747; TWEEDIE, photographing butterflies, 2819.

MISCELLANEOUS.

BACHSTEZ & DESCHAMPS, amino-acids and proteins in Hem. eggs eaten by Mexicans, 90; BRUES, salagubong gong, a toy used with Melolonthids, 433; LEPEZME, discrimination between indigenous and imported forms in faunistic catalogues, 1791; METCALF, methods in systematic entomology, 1953; MUESEBECK, common names approved by American Ass. Econ. Entom., 2021; O'ROURKE, ants as beneficial insects, 2132; PAULIAN, used by man, 2183; PAX, practical uses for termites and termite nests, 2194; ROSS, rôle of the entomological museum, 2387; RUSSO, necessity for a National Museum of Entomology in Italy, Boll. Zool. 16 1949 pp. 97-100; SCHILDER, problems and methods of bio-statistics, 2482; SOMMERMAN, microfilms, 2607; WING, addresses of myrmecologists of the world, 3024.

MORPHOLOGY.

GENERAL ANATOMY.

Insecta.—BOLLOW, 338; ESCOBAR DUARTE, Holometabola, 873; RENSCH relationship between sexual differences and body size, 2334.

Coleoptera.—DARLINGTON, Paussids, 688; DEWAILLY, Melolonthini, 748; EDWARDS, Amphizoidae, 830; KERN, *Amphimallus solstitialis* (Melol.), 1552; KINNMARK, *Onthophagus taurus* (Copr.), 1582; MAKSYMOW, *Ips curvidens* (Scolyt.), 1876.

Hymenoptera.—MOURE & KERR, *Melipona* (Apid.), 2017.

Diptera.—FERRIS, MILLER, in DEMERECK, *Drosophila*, internal and external, 730; MARTIN SANZ & RODRIGUEZ AZAGRA, *Anopheles*

(*Culic.*), 1908; MENON, *Cryptochaetum* (*Agromyz.*), 1941; SÉGUY, 2532; VARGAS & MARTÍNEZ PALACIOS, *Anophelines*, 2860.

Siphonaptera. — JORDAN, characteristics common to all known spp., 1499.

Hemiptera. — VAN DINTHER, *Chionaspis salicis* (*Cocc.*), 755; KRAMER, *Auchenorhynchus* (*Homoptera*), 1636; QADRI & AZIZ, *Pyrilla perpussilla* (*Lophop.*), 2293; TAKAHASHI, *Laccifer lacca* (*Cocc.*), 2721; VILLIERS, *Emesinae* (*Reduv.*), 2912; WILLE, *Psylla piri* and allied spp., 3010.

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BIOMETRICS.

BICK & AYCOCK, *Aphylla wil-liamsoni* (*Odon.*), 302; BROADHEAD, *Liposcelis* (*Psocopt.*), 412; DARBOIS, *Gryllus* (*Orth.*), 686; GREEN, *Chrysolina polita* (*Col.*, *Chrysom.*), 1104; LEJEUNE, *Choristoneura* (*Lep.*, *Tortr.*), 1764; MALLAMAIRE, *Schistocerca gregaria* (*Orth.*, *Arid.*), Fr. Africa, 1881; TEISSIER, *Lucanus cervus* (*Col.*), 2732.

EXOSKELETON, INTEGUMENT.

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Diptera. — ACZÉL, Conopidae, catalogue, 13; BEQUAERT, Northernmost extension of bird Hippoboscidae, Psyche, Cambridge, Mass. 57 p. 113; IRIARTE, Ceratopogonids, list, 1398; LANE, Ceroplatinae (Mycetoph.), revision, 1699; ROZEBOOM & KOMP, *Culex* subgen. *Melanconion*, revision, 2403; SABROSKY, Trichopodini (Larvaevorid.), key to genn., 2421; SHAW & LANE, *Leia* (Mycetoph.), key, 2549; DE SOUZA LOPES, *Boettcheria* (Sarcoph.), revision, 2613; STEYSKAL, *Sepedon* (Sciomyz.), revision, 2659; VARGAS, *Aedes* (Culic.), keys, 2857.

Siphonaptera. — HOLLAND & JAMESON, *Nearctopsylla*, key, 1342.

Hemiptera. — DE CARLO, Ambrysinae (Naucor.), revision, 696; DRAKE, *Pentacora* (Sald.), list, 790; NAST, *Sphenorhina* (Cercop.), revision, 2059; WYGODZINSKY & ABALOS, *Stenolemus* (Reduv.), key, 3066.

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NER, *Proteriades* (Apid.), revision,

2773; WEBER, *Myrmica* (Formic.), revision, 2977; WILLIAMS, *Soliarella* (Spheg.), California, revision, 3017.

Lepidoptera.—FREEMAN, *Theclinae* (Lycaen.), Texas, distribution, 987; HOVANITZ, *Colias* (Pier.), distribution, 1362; JOHNSTON, Pribilof Is., Alaska, 1485; JUDD, *Acentropus niveus* (Pyral.), distribution, 1508; JUNG, New Orleans area, list, 1512; LANGE, *Platyptilia* (Pteroph.), California, revision, 1704; McDUNNOUGH, *Euxoa* (Agrot.), Eastern N. Amer., revision, 1855; RINDGE, *Sericosema* (Geom.), revision, 2351; *Syrrhodia* (Geom.), revision, 2352.

Trichoptera.—HALL, Dallas Co., Texas, 1186; ROSS, Limnephilids, 2389; ROSS & MERKLEY, *Tinodes*, key, 2393.

Neuroptera.—ORMAN & JAQUES, Hemerobiidae, Iowa, preliminary list, 2129.

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Diptera.—BARNES, FELLTON & WILSON, mosquitos (Culic.), New York, annotated list, 130; BROMLEY, Asilids, Florida, catalogue, 413; Asilids, Ohio, V, 415; FAIRCHILD & BRUES, Tabanidae, Phoridae, Connecticut, 898; GOSLIN, Asilidae, Tennessee, list, 1077; HARDY, *Nomoneura*, *Nemomydas* (Mydidae), revisions, 1211; HARMSTON, Culicids, Colorado, list, 1219; HUCKETT, *Paraprosalia* (Musc.), revision, 1370; HULL & FLUKE, *Cheilosia*, subgenn. s. str. and *Hiatomyia* (Syrph.), revision, 1377; JAMES, *Scopeuma* (Scatopphag.), western U.S.A. and southwestern Canada, revision, 1419; JAQUES, Tachinidae, Iowa, 1448; KNOWLTON, Tabanidae, Utah, 1598; KNOWLTON & FRONK, Heleidae, Utah, locality records, 1599; MELANDER, *Aphoebantus*, *Epacmus*, *Euccessia* (Bombyl.), 1933; *Platypygus*, new to fauna; Bombyliids, keys, 1934; MIDDLEKAUFF & QUATE, Tabanids, new distribution records, 1961; MORRISSEY, Tanypodinae (Chiron.), Iowa, 2010; NICHOLSON & MICHEL, Simuliidae, Minnesota, 2064; PENNAK, *Deuterophlebia coloradensis*, first record of adults, 2201; PHILIP,

Tabanidae, corrections and addenda to catalogue, 2220; *Tabanus molestus* and allied spp., keys, 2221; QUISENBERRY, *Euaesta* (Trypet.), revision, 2297; REMPEL, Culicids, Canada, keys, 2330; RUEGER & DRUCE, mosquitos new to Texas, Mosq. News 10 p. 60; SABROSKY, *Dicraeus* (Chlorop.), revision, 2423; THURMAN & JOHNSON, *Culiseta larva* (Culic.), California, key, 2765.

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Mallophaga. — EMERSON, *Lagopoecus*, revision, 859.

Isoptera. — SNYDER, fossil termites, U.S.A., 2598.

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Collembola. — WRAY, *Xenyllodes armatus*, new to fauna, 3050; WRAY, KNOWLTON & MA, Utah, preliminary list, 3051.

CENTRAL AMERICA.

Insecta. — SPIETH, central plateau area of Mexico, introductory account of region, 2624.

Coleoptera. — BÄNNINGER, *Pasimachus* (Carab.), revision, 120; BECHYNE, Eumolpids, 199; types of Eumolpid genn., 206; KULT, *Ardistomis* (Carab.), key, 1657; MALKIN, Mexican Coccinellids, additions to catalogue, 1880; MARTÍNEZ, *Termitodius* (Aphod.), key, 1910; VAURIE, Meloidae, N. Centr. Mexico, 2865.

Hymenoptera. — SCHWARZ, stingless bees, Mexico, 2523.

Lepidoptera. — COLLENETTE, *Eloria* (Lymantr.), revision, 614.

Diptera. — ABONNENC & CHASSIGNET, *Phlebotomus* (Psychod.), Fr. Guiana, XXIII, 8; ACZÉL, Tylidae (Micropez.), catalogue, 12; ALEXANDER, Limoniini, 38; ARNETT, Panama Culicines, 63; BORGMEIER, *Conicromyia* (Phorid.), revision, 352; CARRERA & D'ANDRETTA, Asilidae, Mexico, 519; HERTIG & FAIRCHILD, *Phlebotomus* (Psychod.), Panama, V, 1291; JAMES, Stratiomyids, Tabanids, Acerceratids, Cockerell & Hubbard Expeditions to Honduras, 1422; MARTÍNEZ PALACIOS, *Culex*, key to ♂♂ of subgen. *Culex*, Mexico, 1913; VARGAS & MARTÍNEZ PALACIOS, Anophelines (Culic.), Mexico, 2860.

Siphonaptera. — TRAUB, 2799.

SOUTH AMERICA, including TRINIDAD.

Insecta. — RATKOVICH, Tucumán, Argentina, useful insects, list, 2312.

Coleoptera. — BECHYNĚ, Eumolpids, Argentina, provisional list, 191; *Camptocheira* (Eumolp.), key to known spp., 192; Eumolpids, 199; types of Eumolpid. genn., 200; Chrysomeloidea, Muri, Brazil, 201; Chrysomelids, II, 203; BORGMEIER, termitophilous Staphylinidae, catalogue, 357; FIEDLER, *Gasterocercus* (Curc.), key, 918; FREUDE, Hispids, Cassidids, Venezuela, collected by P. C. Vogl, 995; GUÉRIN, Erotylidæ, Brazil, catalogue, 1141; GUTIÉRREZ ALONSO, Scarabaeids, N. Chile, 1164; Lamellicornia, new to Chile, 1165; HUSTACHE, new Baridinae (Curc.), 1388;

JOLIVET, *Microtheca* (Chrysom.), revision, 1489; KULT, *Ardistomis* (Carab.), key, 1657; KUSCHEL G., Curculionids new to Chile, 1666; MARCUZZI, Tenebrionidae, Venezuela, 1893; MARTÍNEZ, *Glaophyrocanthon* (Coprid.), catalogue, 1909; *Termitodius* (Aphod.), key, 1910; *Megathopha* (Copr.), revision, 1911; MONRÓS & VIANA, Dorynotini (Cassid.), Argentina, revision, 1995; PAPP, Cryptorrhynchinae described by C. Fiedler 2158; SCHEDL, Scolytoidea, new records, 2469.

Hymenoptera.—CALLAN, wasps, Trinidad, 484; ESQUIVEL, parasites and predators, Argentina, supplement, 881; KUSNEZOV, *Pogonomyrmex* subgen. *Ephebomyrmex* (Form.), Patagonia, 1669; *Cyphomyrmex* (Form.), Argentina, revision, 1670; LECLERCQ, *Ectemnius* subgen. *Apocatemnius* (Spheg.), revision, 1744; MOURE & KERR, *Melipona* (Apid.), 2017; OGLOBLIN, *Schizophragma* (Mymar.), key, 2109.

Lepidoptera.—DE BIEZANKO, Sphingidae, Geometridae, Uraniidae, Pelotas and neighbourhood, 304; BOX, *Diatraea* spp. (Pyral.), Venezuela, distribution, 376; COLLENETTE, *Eloria* (Lymantr.), revision, 614; DA COSTA LIMA, Lepidoptera, pt. 2, Brazil, 647; FLEMING, Euchromiidae (Syntom.), Br. Guiana, Venezuela, 938; LAMONT & CALLAN, moths new to Trinidad, 1693; ORFILA, *Prepona* (Nymph.), Argentina, revision, 2127; TRAVASSOS, Arctiidae, XXI–XXII, 2803; VIETTE, *Druceiella* (Hepial.), key, 2896; Hepialids, 2902.

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& ABONNENC, *Culicoides* (Ceratopog.), Venezuela, list, 941; *Phlebotomus* (Psychod.), Venezuela, 943; IRIARTE, *Culicoides* (Ceratop.), Venezuela, key, 1398; DE LUCENA, *Phlebotomus* (Psychod.), north-eastern Brazil, revision, 1835; MARTÍNEZ, Culicidae, Argentina, Bolivia, Paraguay, 1912; MULLIN-DÍAZ, Culicids, new to Uruguay, 2034; ORTIZ C., *Culicoides* (Ceratop.), new to Venezuela, 2134; RACHOU, RICCIARDI & GUEDES, Anophelines (Culic.), Paraguay, 2299; RACHOU & DE SOUSA, *Anopheles nigratarsis* (Culic.), new to Paraná, 2300; DE SOUZA LOPES, *Notochaeta* (Sarcoph.), key, 2614; STEYSKAL, *Prodotictya* (Sciom.), revision, 2657.

Siphonaptera.—JORDAN, Peru, 1500.

Hemiptera.—KORMILEV, Oxycareninae (Lygaeid.), Argentina, 1625.

Thysanoptera.—HOOD, Brazil, II, 1350.

Orthoptera.—LIEBERMANN, *Sinipta* (Acrid.), revision, 1807.

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Thysanoptera. — HOOD, *Plesiotriops* sp. n., Cuba, 1350.

III.—SYSTEMATIC.

GENERAL.

Rôle of morphology in systematics, BROWN Canad. Ent. 81 pp. 299–303.

Anatomy of retrocerebral and sympathetic cephalic glands and their value in systematics, CAZAL Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 116–123, 14 figs.

Subtropical Entomology, EBELING ix & 747 pp. 570 figs.

Insects taken on Cocos-Keeling Is., GIBSON-HILL Bull. Raffles Mus. no. 22 pp. 149–165.

Insects of Gotska Sandö, Sweden, JANSSON Ent. Tidskr. 71 pp. 199–220.

Pests of cultivated plants in Indonesia, I, KALSHOVEN 512 pp. 297 figs.

Medical Entomology, 2nd edn., MATHESON vi & 612 pp. 4 pls. 242 figs.

Guide to British insects, an aid to identification, MORETON vii & 188 pp. 96 figs.

Animal world of USSR, vol. 2, desert zones, PAVLOVSKIĬ & VINOGRADOV (Ed.) 1948 420 pp. 211 figs.

Forest insects of Finland, SAALAS Suomen metsähyyteiset 1949 719 pp. 653 figs. [In Finnish.]

The Insect Guide. Orders and major families of N. American insects, SWAIN 1948 xliii & 261 pp. 175 figs. (many col.).

Survey of insects of Arctic Alaska, I, WEBER Trans. Amer. ent. Soc. 76 pp. 147–206, 7 pls.

Insects of Porto Rico, WOLCOTT J. Agric. Univ. P.R. 32 pp. 1–416, illus.

COLEOPTERA.

Water beetles in Cheshire, Flintshire, etc., BALFOUR-BROWNE Proc. Chester Soc. nat. Sci. 3 pp. 81–134.

Bibliography of Coleoptera of Nordelbingen, BENICK Schr. naturw. Ver. Schleswig-Holstein 23 1942 pp. 176–251, 1 map.

Index to beetle families in "Biol. centr.-amer.", BLACKWELDER Col-ecpt. Bull. 4 pp. 11–14, 23–24.

Comments on Lindroth's Boreo-British Coleoptera, 1935, BLAIR Ent. mon. Mag. 86 pp. 219–220.

Beetle fauna of Tristan da Cunha, BRINCK Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 361–364.

List of Coleoptera from Málaga area, COBOS Bol. Soc. esp. Hist. nat. 47 pp. 570–609.

Classification of famm. of British Coleoptera, CROWSON Ent. mon. Mag. 86 pp. 148–171, 274–288, 327–344, 68 figs.

List of Coleoptera introduced to Barcelona area, ESPAÑOL COLL Graell-sia 7 1949 pp. 27–41, 1 fig.

Auckland Island Coleoptera (synonymic list p. 200), GOURLAY Trans. Proc. roy. Soc. N.Z. 78 pp. 171–202, 3 pls. 15 figs.

Korch's atlas of Danish beetles, HANSEN 128 pp. 251 figs. (243 col.).

Palpicornia — Staphylinoidea (except Staphylinidae) of Centr. Europe, HORION Faunistik Mitt.-Eur. Käfer Bd. 2 1949 xxiii & 388 pp.

Natural history of beetles, HORION Käferkunde f. Naturfr. 1949 xv & 292 pp. 21 pls. 1 col. frontisp. 169 figs.

Further additions to the Bedfordshire list of Coleoptera, JARVIS Ent. mon. Mag. 86 pp. 304–308.

Bruchids, Anthribids, Brenthids, Nemonychids in Mus. Zool. Coimbra, LADEIRO Mem. Estud. Mus. zool. Coimbra no. 199, 10 pp.

Hydradephagous Coleoptera of Nevada, exclusive of Dytiscids, LA RIVERS Bull. S. Calif. Acad. Sci. **48** pp. 129-140.

Coleoptera of French Polar Expedition to Greenland, DE LESSE Entomologiste **6** pp. 73-76.

Systematic notes on some Adephaga in Museum of Dundo, LUNA DE CARVALHO Publ. cult. Mus. Dundo no. 7 pp. 59-67, 6 figs.

Coleoptera of Öland, LUNDBLAD Ent. Tidskr. **71** pp. 63-76, 3 figs.

Some Coleoptera from E. Czechoslovakia, OLEXA Acta Soc. ent. Čsl. **47** pp. 52-57.

Notes on Swedish Coleoptera, V, PALM Ent. Tidskr. **71** pp. 129-143, 13 figs.

Coleoptera of R. Indalsälven, Jämtland, PALM Opusc. ent., Lund **15** pp. 1-6.

Coleoptera of the Harz, Germany, POLENTZ Ent. Bl. **45-46** pp. 10-12.

Coleoptera notes V, STRAND Norsk ent. Tidsskr. **8** pp. 82-84.

CICINDELIDAE.

Cicindelinae of Air, Fr. Sudan, BASILEWSKY Mém. Inst. franç. Afr. noire no. 10 pp. 232-234.

Elytral markings of Cicindelids, RIVALIER Entomologiste **6** pp. 99-104, 18 figs.

Preliminary reclassification of Palaearctic genera of Cicindelidae (key p. 221), RIVALIER Rev. franç. Ent. **17** pp. 217-244, 11 figs.

Achemenia gen. n. for *Cicindela mona-lisa* Horn p. 243 figs., RIVALIER Rev. franç. Ent. **17**.

Apterodela gen. n. for *Cicindela ovipennis* Bates (type), *C. lobipennis* Bates p. 231 figs., RIVALIER t.c.

Cephalota turcica Schaum raised to sp. and not a subsp. of *hispanica*; (*Taenidia* subgen. n.) p. 229 figs., RIVALIER t.c.

Cicindela maroccana F. re-established as a sp. and not subsp. of *campestris* p. 93; c. subsp. *pseudomaroccana* Roes. transferred to *maroccana* p. 96; scope pp. 223-228; *majalis* Mandl raised to sp. and not

subsp. of *hybrida* p. 225 figs., RIVALIER t.c.—*C. campestris*, *maroccana* status discussed pp. 285-290; c. subsp. n. *schrammi* p. 287; m. abb. n. *mamorensis*, *viridi-coerulea* p. 288 Morocco, ANTOINE Rev. franç. Ent. **17**.—*C. campestris* key to European, N. African and W. Asian races p. 65 figs., PAPP Misc. ent. Paris **46** 1949.—*C. spp.* from Shansi, China pp. 28-32, SHIRAHATA Trans. Kansai ent. Soc. **15** pt. 2.—*C. californica* subsp. n. *viridicyanea* p. 1; *scutellaris* subsp. n. *flavoviridis* p. 2, *rugata* p. 3; *lemniscata* subsp. n. *rufipes* (also Mexico) p. 5 U.S.A., VAURIE Amer. Mus. Novit. no. 1458.—*C. chinensis* var. n. *konoji* Japan p. 14 figs., GOTÔ & IGA Ent. Rev. Jap. 5.—*C. laetescrita* see *Tribonophora*; *coquereli* see *Platydela*; *ismenia* see *Homodela*; *maura* see *Spiralia*; *maindroni*, *helferi*, *bellana* see *Salpingophora*; *mona-lisa* see *Achemenia*; *ovipennis*, *lobipennis* see *Apterodela*.

Cylindera rectangularis Klug a sp. and not subsp. of *octoguttata*; (*Eugrapha* subgen. n.) p. 233 figs., RIVALIER Rev. franç. Ent. **17**.

Eugrapha subgen. n. (type *trisignata* Dej.) see *Cylindera*.

Homodela gen. n. for *Cicindela ismenia* Gory p. 231 figs., RIVALIER Rev. franç. Ent. **17**.

Megacephala regalis subsp. n. *desaegeeri* p. 78, *katangana* p. 79, *catenulata* p. 80 Beig. Congo map, BASILEWSKY Bull. Soc. ent. Fr. **55**.

Monelica subgen. n. (type *fastidiosa* Dej.) see *Myriochile*.

Myriochile (*Monelica* subgen. n. p. 235) figs., RIVALIER Rev. franç. Ent. **17**.

Platydela gen. n. for *Cicindela coquereli* Fairm. p. 236 figs., RIVALIER t.c.

Salpingophora gen. n. for *Cicindela maindroni* Horn (type), *C. helferi* Schaum, *C. bellana* Horn p. 242 figs., RIVALIER t.c.

Spiralia gen. n. for *Cicindela maura* L. p. 230 figs., RIVALIER t.c.

Taenidia subgen. n. (type *circumdata* Dej.) see *Cephalota*.

Tribonophora gen. n. for *Cicindela laetescrita* Motsch. p. 240 figs., RIVALIER Rev. franç. Ent. 17.

CARABIDAE.

Revision of Harpalinae of Africa and Madagascar, pt. I, (list of spp. pp. 277-280), BASILEWSKY Ann. Mus. Congo belge (Sér. 8°) Sci. zool. 6 283 pp. 9 pls. 198 figs.

Revision of S. African Anchomenniae, with keys to spp., BASILEWSKY Ark. Zool. (2) 1 pp. 275-299, 28 figs.

Key to genn. of Callistinae (Chlaeniinae) of Africa, BASILEWSKY Bull. Ann. Soc. ent. Belg. 86 pp. 40-54.

Carabidae of Aïr, Fr. Sudan, BASILEWSKY Mém. Inst. franç. Afr. noire no. 10 pp. 231-260, 1 fig.

Carabidae of the "Mission scientifique de l'Omo," BASILEWSKY Mére. Mus. Hist. nat., Paris (N.S.) 20 1948 pp. 189-222, 18 figs.

Keys to genn. and spp. of African Chlaeniodini and Chlaenionini, BASILEWSKY Rev. franç. Ent. 17 pp. 109-135, 26 figs.

Critical notes on Lindroth's Fennoscandinavian Carabids, III, LUND-BLAD Ent. Tidskr. 71 pp. 27-32.

Notes on Carabidae, II, OHKURA Ent. Rev. Jap. 5 pp. 35-36 [in Japanese].

Carabids of Deggendorf district, Bavaria, v. POSCHINGER Ent. Bl. 45-46 pp. 18-21.

Carabidae of Moson, Hungary, RÉVY Folia ent. hung. 8 1943 pp. 47-52.

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Acupalpus meridianus ab. n. *pu-cholti* Prague p. 13 fig., HAVELKA Acta Soc. ent. Csl. 47.

Afromizonus ruber sp. n. Kenya p. 273 figs., BASILEWSKY Ann. Mus. Congo belge (Sér. 8°) Sci. zool. 6.

Agonum interstitiale see *Metagonus gilvipes*.

Akephorus Lec. a good genus and not syn. of *Dyschirius*; *minarum* Putz., *pampicola* Putz. from *D.*; *bruchi* p. 131, *darwini* p. 132, *ogloblini* p. 135 Argentina, *bryanti* Brazil, Paraguay p. 133 spp. n., KULT Acta Soc. ent. Csl. 47.

Anchomenus catalai, *uyttenboogaarti* sicc *Pseudomegalonychus*; *pauper* see *Liagonum xantholoma*.

Anisodactylus overlaeti see *Phanagnathus*.

Anthia Weber (= *Pachymorpha* Hope (preocc. by Gray)) p. 80, BASILEWSKY Bull. Soc. ent. Fr. 55.

Aphaenops hustachei subsp. n. *pseudocrypticola* French Pyrenees p. 75 figs., COIFFAIT Publ. Mus. Hist. nat., Paris no. 8 1947.—*A.* revision of Pyrenean spp. pp. 108-120, key p. 108 (no. 8 1947), pp. 14-16 (no. 11 1948); (A.) *ludovici* subsp. n. *gaudini* p. 110; (*Hydraphaenops*) *pusillus* sp. n. p. 118 Fr. Pyrenees (no. 8 1947); revision of French spp. of subgen. *Hydraphaenops* pp. 17-27; (*H.*) *pandellei* subsp. n. *ambiliensis* Fr. Pyrenees p. 26 (no. 11 1948) figs., JEANNELL Publ. Mus. Hist. nat. Paris.—*A.* (A.) *bonneti* sp. n. p. 83; *tiresias* subsp. n. *juliettae* p. 85 French Pyrenees figs., FOURÈS Publ. Mus. Hist. nat., Paris no. 10 1948.

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Apristus rudicollis sp. n. Kenya p. 215 figs., BASILEWSKY Mém. Mus. Hist. nat., Paris (N.S.) 20 1948.

Ardistomiellus subgen. n. (type *viridulus* Say) see *Ardistomis*.

Ardistomis key to Neotropical subgenn. and groups; (*Semiardistomis* p. 301, *Ardistomiellus* p. 303 subgenn. n.); (s. str.) *ogloblini* p. 303, (s. str.) *quadripunctatus* p. 304, (s. str.) *marquartii* p. 305, (s. str.) *lindrothi* p. 306, (S.) *darlingtoni* p. 311, (S.) *maindroni* p. 312, (S.) *jadlickai* p. 313, (S.) *emdeni* p. 314 Brazil, (s. str.) *guadeloupensis* Guadeloupe p. 307, (S.) *mülleri* Mexico p. 308, (S.) *balthasari* p. 309, (S.) *vlastae* p. 310, (S.) *brittoni* p. 316 Argentina, (S.) *marani* Bolivia p. 315, (S.) *pilosellus* Uruguay p. 317 spp. n., KULT Arthropoda, Buenos Aires 1.

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Brachinus atbarae sp. n. Br. Columbia p. 102, STEHR Ohio J. Sci. 50.

Bradybaenus oxyomus Chaud. (= *nigerense* Vuill.) p. 243, BASILEWSKY Mém. Inst. franç. Afr. noire no. 10.

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Chlaeniodromus gen. n. type *tetraphacus* All. p. 48, BASILEWSKY Bull. Ann. Soc. ent. Belg. 86.

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Dichaetochilus moestus subsp. n. *eburneus* Ivory Coast p. 57 figs., BASILEWSKY Ann. Mus. Congo belge (Sér. 8°) Sci. zool. 6.—*D. straneoi* sp. n. Eritrea p. 7 figs., BASILEWSKY Ann. Mus. Stor. nat. Genova 64 1949.

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Macrochilus cordicollis sp. n. Abyssinia p. 159, MÜLLER Atti Mus. Stor. nat. Trieste 17 1949.

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Micromelomalus see *Bembidion (Plataphus)*.

Migadopinae subfam. n. p. 175 figs., GOURLAY Trans. Proc. roy. Soc. N.Z. 78.

Neaphaenops tellkampfi subsp. n. *henroti* Kentucky p. 89 figs., JEANNEL in JEANNEL & HENROT Publ. Mus. Hist. nat., Paris no. 12 1949.

Nebria (Nebriola) cordicollis Alpine races pp. 1–9 (with subsp. n. *ticinensis* Tessin p. 5); *heerei* Dan. a subsp. of c. p. 8, BÄNNINGER Ent. Bl. 45–46.—*N. nivalis* a British sp., characters p. 221 figs., BLAIR Ent. mon. Mag. 86.

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Parasiopelus lucens Putz. designated type p. 219 figs., BASILEWSKY Ann. Mus. Congo belge (Sér. 8°) Sci. Zool. 6.

Paratheles subgen. n. (type *tibialis* Laf.) see *Laparhetes*.

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Perigona (P.) microphthalma sp.n. Venezuela p. 166 fig., JEANNEL Rev. franç. Ent. **17**.

Perileptus africanus subsp. n. *elisabethanus* Belg. Congo p. 252, BASILEWSKY Rev. Zool. Bot. afr. **43**.

Phanagnathus gen. n. for *Anisodactylus overlaeti* Burg. p. 35 figs., BASILEWSKY Ann. Mus. Congo belge (Sér. 8°) Sci. zool. **6**.

Philorhizus delottoi sp. n. Eritrea p. 34, BASILEWSKY Boll. Soc. ent. ital. **80**.—*P. alticola* sp. n. Kenya p. 216 figs., BASILEWSKY Mém. Mus. Hist. nat., Paris (N.S.) **20** 1948.

Phimus nanniscus Pér. (= *tabularis* Stran.) p. 279, BASILEWSKY Ark. Zool. (2) **1**.

Plagiopyga leleupi p. 257, *taterae* p. 259 spp. n. Belg. Congo figs., BASILEWSKY Rev. Zool. Bot. afr. **43**.

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Plocamotrechus pauliani sp. n. Madagascar p. 173 figs., JEANNEL Rev. franç. Ent. **17**.

Proctetus cryptomydis sp. n. Belg. Congo p. 255 figs., BASILEWSKY Rev. Zool. Bot. afr. **43**.

Prostalomus gen. n. for *Haplocoleus parcepunctatus* Jeann. p. 250 figs., BASILEWSKY Ann. Mus. Congo belge (Sér. 8°) Sci. zool. **6**.

Protognathus gen. n. for *Dichiropsis zabrodes* All. (type), *D. perrieri* Jeann. p. 36 figs., BASILEWSKY Rev. Zool. Bot. afr. **43**.

Pseudanophthalmus revision of N. American spp. pp. 37–88, key p. 38; *horni* subspp. n. *garmani*, *minor* p. 49; *robustus* subsp. n. *neglectus* p. 50; *valentinei* p. 51, *henroti* p. 69, *lallementi* p. 74 spp. n.; *eremita* subsp. n. *longicollis* p. 56 U.S.A. figs., JEANNEL in JEANNEL & HENROT

Publ. Mus. Hist. nat., Paris no. 12 1949.

Pseudochlaeniellus madagascariensis sp. n. Madagascar p. 187 fig., BASILEWSKY Rev. franç. Ent. **17**.

Pseudomegalonychus gen. n. for *Anchomenus catalai* Jeann., *A. uytenboogaarti* Basil. (type) p. 296, BASILEWSKY Ark. Zool. (2) **1**.

Pseudoapterus see *Oopterus*.

Pseudoperyphus subgen. n. (type *chalceum* Dej.) see *Bembidion*.

Pseudozaena (Afrozaena) feai p. 1, *insularis* p. 3 spp. n. S. Thomé; key to African spp. (excl. Madagascar) p. 4 figs., BASILEWSKY Ann. Mus. Stor. nat. Genova **64** 1949.

Pterostichus niger ab. n. *dvořákovae* Bohemia p. 95, HÜBNER Acta Soc. ent. Čsl. **47**.—*P. (Orites) negligens* subsp. n. *patris* Slovakia p. 154. ALES Acta Soc. ent. Čsl. **47**.—*P. cristatus* group, morphology pp. 311–315, QUÉZEL, VERDIER & RIOUX Vie et Milieu **1**.

Rhysotrachelus exaratus sp. n. Ivory Coast p. 135; *quadrimaculatus* var. n. *agraphus* S. Rhodesia, subsp. n. *elgonicus* Kenya p. 136 figs., BASILEWSKY Mém. Mus. Hist. nat., Paris (N.S.) **28** 1949.—*R. (R.) jokoensis* sp. n. Cameroons; (*Paratrachelus subgen. n.*) p. 129 figs., BASILEWSKY Rev. franç. Ent. **17**.

Ripogena milicola sp. n. Belg. Congo, Ivory Coast p. 254, BASILEWSKY Rev. Zool. Bot. afr. **43**.

Ryugadous gen. n. p. 50, *ishikawai* sp. n. Japan p. 51 fig., HABU Mushi **21**.

Schizogenius longipennis Putz. raised to sp. and not var. of *tristriatus* Putz.; *darlingtoni* p. 140, *championi* (also Guatemala) p. 142 Panama, *maculatus* p. 143, *janae* p. 145, *elongatus* p. 146, *multipunctatus* p. 147, *bänningeri* p. 148 Brazil, *székessyi* Colombia p. 144 spp. n., KULT Acta Soc. ent. Čsl. **47**.

Semiardistomis subgen. n. (type *labialis* Putz.) see *Ardistomis*.

Singilis soror alternans ab. n. *uniformis* Spain p. 49, MATEU Eos **26**.

Siopelus (*Liosepus* subgen. n. p. 174); (*S.*) *alticola* sp. n. Cameroons p. 184 figs., BASILEWSKY Ann. Mus. Congo belge (Sér. 8°) Sci. zool. 6.

Sphodropsis nipponicus sp. n. Japan p. 51 fig., HABU Mushi 21.

Stereodema hirtipenne var. n. *reductum*, ab. n. *kivuense*, subsp. n. *basilewskyi* Belg. Congo p. 132 fig., STRANEO Bull. Ann. Soc. ent. Belg. 86.

Stereostoma solidum subsp. n. *orientalis* Kenya p. 128, STRANEO t.c.

Syleter pallidus sp. n. Belg. Congo p. 251, BASILEWSKY Rev. Zool. Bot. afr. 43.

Syntomus bresi sp. n. France p. 131 figs., VERDIER, QUÉZEL & RIOUX Bull. Soc. ent. Fr. 55.

Tachylopha leleupi sp. n. Belg. Congo p. 188, BASILEWSKY in BASILEWSKY & STRANEO Rev. Zool. Bot. afr. 43.

Tachyphanes biplagiatus Dej. (= *guttatus* Burg.) p. 239, BASILEWSKY Mém. Inst. franç. Afr. noire no. 10.

Tachyura sudanensis Schatz. & Koch (= *polysarca* All.) p. 237. BASILEWSKY t.c.—*T. vandenberghaei* sp. n. Belg. Congo p. 189, BASILEWSKY in BASILEWSKY & STRANEO Rev. Zool. Bot. afr. 43.

Termophilum n. n. for *Thermophila* Hope neo Hb. (Lep.) p. 80, BASILEWSKY Bull. Soc. ent. Fr. 55.

Thermophila see *Termophilum*.

Tomocarabus convexus weisei Reitt. (= *Carabus borealis* Geh.) p. 203, BREUNING Ent. Arb., München 1.

Trechodes leleupi sp. n. Belg. Congo p. 252, BASILEWSKY Rev. Zool. Bot. afr. 43.

Trechus distributional notes on Palaearctic spp. pp. 67–74; (*T.*) *piazzolii* p. 67, (*T.*) *cerrutii* p. 71 spp. n. Italy; (*T.*) *fairmairei* variation and distribution in Italy p. 68 figs., FOCARILE Boll. Soc. ent. ital. 80. —*T. pertyi* group of the Orobic Alps region distinguishing characters p. 56, key to spp. p. 57, catalogue p. 66; (*T.*) *montis-arerae* p. 60, (*T.*) *intrusus* p. 63 spp. n. Italy, FOCARILE Mem. Soc. ent. ital. 29.—*T. longulus* subsp. n. *perinii* S. Dolomites p. 104,

HOLDHAUS Mem. Soc. ent. ital. 29.—*T. (T.) gugheensis* sp. n. Abyssinia p. 177 figs., JEANNEL Rev. franç. Ent. 17.—*T. (T.) distinctus* subsp. n. *negrei* Spain p. 44 figs., MATEU Eos 26.—*T. longicollis* subsp. n. *slovenicus* Yugoslavia p. 491; *constrictus* subsp. n. *franzi* Austrian Alps; *elegans* subsp. n. *hiltzeli* Karawanken p. 492 figs., SCHWEIGER Proc. 8th int. Congr. Ent. Stockholm 1948, 1950.

Trichaphaenops (*Arctaphaenops*) *angulipennis* larva p. 306 figs., STROUHAL Ann. naturh. Mus. Wien 57.

Troglorites ochsi subsp. n. *ambitus* p. 86 (with r.n. n. *sarreensis* p. 87) France, LANEYRIE Publ. Mus. Hist. nat., Paris no. 11 1948.

PAUSSIDAE.

Taxonomy of Paussids, with a new classification, DARLINGTON. Trans. Amer. ent. Soc. 76 pp. 88–117 figs.

Notes on the classification of Paussidae in the revision of Col. Cat. pars 5, JANSSENS Bull. Inst. Sci. nat. Belg. 26 no. 51 pp. 1–4.

Key to Paussid genn. in Belgian Congo & Angola, LUNA DE CARVALHO Publ. cult. Mus. Dundo no. 7 p. 61.

Paussidae of Parc nat. Albert, Belg. Congo, REICHENSPERGER Explor. Parc nat. Albert, Miss. de Witte fasc. 68 12 pp. 2 figs.

Abavopaussus gen. n. pp. 208, 209, KOLBE Zool. Anz. 72 1927; status discussed p. 93, DARLINGTON Trans. Amer. ent. Soc. 76.

Amphipaussus subgen. n. (type *alienus* sp. n.) see *Paussus*.

Arthropteropsis a subgen. of *Homopterus*, q.v.

Atavopaussus see *Protopaussus*.

Carabidomennus Kolbe *pallidus* Raffr. designated type p. 106, DARLINGTON Trans. Amer. ent. Soc. 76.—C. (*Carabidomimus* subgen. n.) *reichenspergeri* p. 197, (s. str.) *luluanus* spp. n. Belg. Congo; key to spp. p. 201 fig., BASILEWSKY Rev. Zool. Bot. afr. 43.

Carabidomimus subgen. n. (type *reichenspergeri* sp. n.) see *Carabidomennus*.

Cerapterus Swed., *Mesarthropterus* Wasm. a subgen. p. 96, DARLINGTON Trans. Amer. ent. Soc. **76**.

Euplatyrhopalus Desn. *aplustrifer* Westw. designated type p. 107, DARLINGTON t.c.

Falcoaussus gen. n. for *Paussus granulatus* Westw. p. 103, DARLINGTON t.c.

Homopterus Westw., *Arthropteropsis* Kolbe a subgen. p. 96, DARLINGTON t.c.—*H. (H.) subcordatus* sp. n. Panama p. 68 figs., DARLINGTON Psyche **57**.

Mesarthropterus a subgen. of *Cerapterus*, q.v.

Paussus (Amphipaussus) subgen. n. p. 130) *alienus* sp. n. Belg. Congo p. 124; *woerdeni* further description p. 130; additions to work on African Paussids published in 1948 pp. 133–134 figs., REICHENSPERGER Rev. Zool. Bot. afr. **43**.—*P. wittei* sp. n. Belg. Congo p. 3 figs., REICHENSPERGER Explor. Parc nat. Albert, Miss. de Witte fasc. 68.—*P. occlusus* sp. n. Biliran I., Philippines p. 70, DARLINGTON Psyche **57**.—*P. dichrous* sp. n. Belgian Congo p. 1 fig., JANSSENS Bull. Inst. Sci. nat. Belg. **26** no. 8.—*P. verticalis* Reiche (= *saharae* Bedel) p. 1, JANSSENS op. cit. **26** no. 13.—*P. granulatus* see *Falcoaussus*.

Platyrhopalides Wasm. a subgen. or synonym of *Platyrhopalopsis* p. 98, DARLINGTON Trans. Amer. ent. Soc. **76**.

Platyrhopalopsis Desn. *mellyi* Westw. designated type p. 107, DARLINGTON t.c.

Protopaussus Gestro (= *Atavopaussus* Kolbe p. 93), DARLINGTON t.c.

RHYSODIDAE.

Catalogue of Rhysodidae, HINCKS Coleopt. Catal. (Suppl.) pars 1 (2nd ed.) 18 pp.

CUPESIDAE.

Cupes sybillae sp. n. Fukien p. 83 figs., KLAPPERICH Bonn. zool. Beitr. **1**.

HYGROBIIDAE (PELOBIIDAE).

Hygrotidae of Vallvidrera, Barcelona, LAGAR Graellsia **7** 1949 p. 52.

AMPHIZOIDAE.

Amphizoa external morphology pp. 306–320, key to known spp. p. 322; *carinata* sp. n. Colorado p. 326 figs., EDWARDS Wasmann J. Biol. **8**.

HALIPLIDAE.

Haliplidae of Vallvidrera, Barcelona, LAGAR Graellsia **7** 1949 p. 52.

Haliplidae of Moson, Hungary, Révy Folia ent. hung. **8** 1943 p. 52.

Preliminary list of Haliplidae of Iowa, SCHAFFNER & JAQUES Proc. Iowa Acad. Sci. **55** 1948 p. 435.

Haliplus fluviatilis, immaculatus larvae p. 46 figs., BERTRAND Bull. Soc. ent. Fr. **55**.—*H. emmerichi* ♂; (*Liaphlus*) *perroti* sp. n. Tonkin p. 25, GUIGNOT Bull. Soc. linn. Lyon **19**.—*H. eximius* Clark (= *emmerichi* Falk.) p. 97, GUIGNOT Rev. franç. Ent. **17**.

DYTISCIDAE.

Dytiscids of N. Rhodesia, BALFOUR-BROWNE Occ. Pap. Mus. S. Rhod. **2** pp. 359–381, 28 figs.

Dytiscids of Air, Fr. Sudan, GURGNOT Mém. Inst. franç. Afr. noire no. 10 pp. 260–262.

Characters of Methlinae, GUIGNOT Rev. franç. Ent. **17** pp. 97–99.

Dytiscidae of Vallvidrera, Barcelona, LAGAR Graellsia **7** 1949 pp. 53–56.

Dytiscidae of Moson, Hungary, Révy Folia ent. hung. **8** 1943 pp. 52–53.

Preliminary list of Dytiscidae of Iowa, SCHAFFNER & JAQUES Proc. Iowa Acad. Sci. **56** 1949 p. 398.

Africophilus pauliani sp. n. Madagascar p. 53 fig., LEGROS Nat. malgache **2**.

Agabus pisobius Br. Columbia p. 246, *solus* Alaska p. 248 spp. n. figs., LEECH Wasmann Collector **7**.

Aglymbus pilatus sp. n. Fr. Guiana p. 102, GUIGNOT Rev. franç. Ent. **17**.

Amarodytes (A.) segrix sp. n. Brazil p. 7, GUIGNOT Bull. Inst. Sci. nat. Belg. **26** no. 36.

Bidessus inflatus p. 1, *hobbsi* p. 4 spp. n. Florida figs., YOUNG Occ. Pap. Mus. Zool. Univ. Michigan no. 526.

Clypeodytes subgen. *Lioclypeus* n. n. for *Liodytes* Guign. (emend. for *Leiodytes* Guign.) nec Cope (Rept.); subgen. *Hypoclypeus* n. n. for *Hypodytes* Guign. nec Gistl (Pisces) p. 97; (*H.*) *pertusus* sp. n. Tonkin p. 100, GUIGNOT Rev. franç. Ent. 17.

Copelatus villiersi Senegal, Niger p. 26, *macellus* Belg. Congo p. 27 spp. n., GUIGNOT Bull. Soc. linn. Lyon 19.—*C. pulchellus* revision of complex with list of synonyms p. 363; p. Klug redescription p. 365; *insularis* Mauritius p. 367, *aldabrensis* Aldabra I., *latus* p. 368, *neavei* p. 375 N. Rhodesia, *tostus* (also N. Rhodesia) p. 372, *hardenbergi* p. 374 Port. E. Africa spp. n., figs., BALFOUR-BROWNE Occ. Pap. Mus. S. Rhod. 2.

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Desmopachria phacoides sp. n. Paraguay, Bolivia p. 1; (*Pachriostrix* subgen. n.); key to subgenn. p. 3, GUIGNOT Bull. Inst. Sci. nat. Belg. 26 no. 36.—*D. (D.) basicollis* sp. n. Costa Rica, p. 151; key to subgenn. (*Pachriodesma*, *Nectoserrula* subgenn. n.) p. 152, GUIGNOT Bull. Soc. ent. Fr. 54.

Deuteronectes abbreviatus see *Nectoporos*.

Dryephorus subgen. n. (type *nodieri* Rég.) see *Herophydrus*.

Dytiscus (Macrodytes) hatchi sp. n. U.S.A., Br. Columbia p. 50; key to N. American spp. of subgen. M. p. 51, WALLIS Canad. Ent. 82.

Guignotus cilunculus sp. n. Madagascar p. 127, GUIGNOT Nat. Malagache 2.—*G. parilis* sp. n. Belg. Congo p. 211 fig., GUIGNOT Rev. Zool. Bot. afr. 43.

Heroceras gen. n. for *Herophydrus descarpentriesi* Pesch. p. 150, GUIGNOT Bull. Soc. ent. Fr. 54.

Herophydrus inquinatus Boh. (= *ignoratus* Gschw., *kalaharii* Gschw.) p. 146; *expressus* Gschw. an ab. of

colasi Guign. p. 147; key to allied genn. & subgenn. (*Dryephorus* subgen. n.) p. 150; *labiosus* sp. n. Natal p. 148 figs., GUIGNOT t.c.—*H. pauliani* sp. n. Madagascar p. 128, GUIGNOT Nat. Malagache 2.—*H. oscillator* Sharp (= *labiosus* Guign.) p. 97, GUIGNOT Rev. franç. Ent. 17.—*H. descarpentriesi* see *Heroceras*.

Hydaticinus subgen. n. (type *rectus* Sharp) see *Hydaticus*.

Hydaticus (*Hydaticinus* subgen. n.) key to subgenn. p. 104, GUIGNOT Rev. franç. Ent. 17.

Hydrocanthus (*H.*) *laevigatus* Brullé (= *dispar* Guign.) p. 97, GUIGNOT t.c.—*H.* (*Sternocanthus*) *adrasus* sp. n. W. Africa p. 26, GUIGNOT Bull. Soc. linn. Lyon 19.

Hydroporus tademus sp. n. Br. Columbia p. 243, LEECH Wasmann Collector 7.

Hydrovatus capnius p. 3, *hamatus* p. 4 spp. n. Belg. Congo, GUIGNOT Bull. Inst. Sci. nat. Belg. 26 no. 36.—*H. acuminatus* subsp. n. *furvus* Philippines p. 25, GUIGNOT Bull. Soc. linn. Lyon 19.—*H. badius* subsp. n. *deserticola* Fr. Sudan p. 260, GUIGNOT Mém. Inst. franç. Afr. noire no. 10.—*H. régimbarti* Zimm. (= *navigator* Guign.) p. 97; *omentatus* sp. n. Fr. Congo p. 99, GUIGNOT Rev. franç. Ent. 17.

Hygrobia Latr. 1804 (emend. of *Hygriobia*) type *hermanni* F., placed on Official List, *tardus* Herbst placed on Official List of Specific Trivial Names, Bull. zool. Nomen. 4 pp. 460–461.

Hyphhydrus (*Apriophorus*) *aethiopicus* ab. n. *bechynéi* Transvaal p. 270, GUIGNOT Ent. Arb., München 1.—*H. africanus* larva p. 264 fig., BERTRAND Mém. Inst. franç. Afr. noire no. 10.

Hypoclypeus subgen. n. n. see *Clypeodytes*.

Lacconectus type *fulvescens* Mots. not *basalis* Sharp p. 97, GUIGNOT Rev. franç. Ent. 17.

Laccophilus adjutor sp. n. Uganda p. 271; *conjunctus* Guign. raised to sp. and not var. of *lineatus* p. 272 figs., GUIGNOT Ent. Arb., München 1.—*L. hyalinus* ab. n. *bimaculatus* Spain p. 23, LAGAR Graellsia 7 1949.

Leiodytes (emended to *Liodytes*) see
Clypeodytes (*Lioclypeus*).

Lioclypeus subgen. n.n. see
Clypeodytes.

Lioporeus gen. n., *brownei* sp. n.
New South Wales p. 101, GUIGNOT
Rev. franç. Ent. 17.

Nectoporus gen. n. for *Deuteronectes abbreviatus* Fall p. 26, GUIGNOT
Bull. Soc. linn. Lyon 19.

Nectoserrula subgen. n. (type *mendozana* Steinh.) see *Desmopachria*.

Pachriodesma subgen. n. (type *latissima* Lec.) see *Desmopachria*.

Pachriostrix subgen. n. (type *grouvellei* Rég.) see *Desmopachria*.

Potamonectes nemethi sp. n. Morocco p. 153, GUIGNOT Bull. Soc. ent. Fr. 54.

Rhantaticus larva p. 265, BERTRAND
Mém. Inst. franç. Afr. noire no. 10.

Suphis bullatus sp. n. Paraguay p. 9, GUIGNOT Bull. Inst. Sci. nat. Belg. 26 no. 36.

Suphisellus brunneus Brazil p. 152,
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Yola elegantula subsp. n. *chopardi*
Fr. Sudan p. 261, GUIGNOT Mém. Inst. franç. Afr. noire no. 10.—*Y.*
(*Yolula* subgen. n. p. 100) key to
subgenn. p. 101, GUIGNOT Rev. franç.
Ent. 17.

Yolula subgen. n. (type *dohrni*
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GYRINIDAE.

Gyrinidae of N. Rhodesia, BALFOUR-BROWNE Occ. Pap. Mus. S. Rhod. 2 pp. 381–382.

Gyrinidae of Air, Fr. Sudan, GUIGNOT Mém. Inst. franç. Afr. noire no. 10 pp. 262–263.

Gyrinidae of Vallvidrera, Barcelona, LAGAR Graellsia 7 1949 p. 55.

Corrections and additions to Cat. Col. Japonicum of Miwa and Chûjô, ÔCHS Opusc. ent., Lund 15 pp. 75–79.

Gyrinidae of Moson, Hungary, RéVY Folia ent. hung. 8 1943 p. 53.

Dineutus key to subgenn. p. 125,
scope pp. 126–127, GUIGNOT Bull.
Soc. linn. Lyon 19.

Gyrinus *substriatus* ab. *schatz-*
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Lund 15.

Oretochilus agilis further descrip-
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Oretoctogyrus list of spp. of Lolodorf,
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p. 28; *specularis* subsp. n. *lolodorfensis*
Cameroons p. 30 figs., OCHS Ent.
Bl. 45–46.

STAPHYLINIDAE.

Catalogue of neotropical termito-
philous Staphylinidae, BORGMEIER
Rev. Ent., Rio de J. 21 pp. 625–650,
figs. .

Staphylinidae of Parc nat. Albert,
Belg. Congo, CAMERON Explor. Parc
nat. Albert, Miss. de Witte fasc. 59,
85 pp.

Staphylinidae of Air, Fr. Sudan,
CAMERON Mém. Inst. franç. Afr.
noire no. 10 pp. 212–215, 1 fig.

Key to genn. and subgenn. of
Eleusiini, STEEL Trans. Proc. roy.
Soc. N.Z. 78 p. 215.

List of Staphylinidae of Gloucester-
shire, TOWNSEND Proc. Cotteswold
Nat. Fld Cl. 30 pp. 52–61.

Abroteles Casey (= *Termitothymus*
Silv.) p. 653; *compacticornis* sp. n.
Brazil p. 654 figs., BORGMEIER Rev.
Ent., Rio de J. 21.

Acanthoglossa apicipennis sp. n.
Ivory Coast p. 227, CAMERON Mém.
Mus. Hist. nat., Paris (N.S.) 20 1948.

Acylophorus persimilis sp. n. Ma-
laccia p. 24, CAMERON Ann. Mag. nat.
Hist. (12) 3.

Adinopsis further description p.
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CAMERON Rev. Zool. Bot. afr. 43.

Aleochara (Rheochara) mixta, (*Dys-*
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Albert, Miss. de Witte fasc. 59.—*A.*
(*A.*) *pseudonigra* sp. n. Selangor p.
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(12) 3.

Allopygus gen. n. (Xanthopygi) p. 21, *malayanus* sp. n. Pahang p. 22, CAMERON t.c.

Amanota (?) *semiopaca* sp. n. Ivory Coast p. 237, CAMERON Mém. Mus. Hist. nat., Paris (N.S.) 20 1948.—*A. wittei* p. 51, *congoensis*, *submetallica* p. 52, *laevis* p. 53, *metallica* p. 54 spp. n. Belg. Congo; *basalis* Cam. from *Myrmecopora* p. 51 (note), CAMERON Explor. Parc nat. Albert, Miss. de Witte fasc. 59.

Amarochara (A.) *tropica* p. 76, (A.) *congoensis*, (A.) *robusta* p. 77 spp. n. Belg. Congo, CAMERON t.c.

Ancyrophorus revision of Palaeoarctic spp. pp. 53–76, key p. 54; (A.) *jailensis* Crimea p. 66, (A.) *lenkoranus* Lenkoran p. 68, (A.) *carnicus* Carinthian Alps p. 70, (A.) *strandii* Norway, Finland p. 72, (A.) *mediterraneus* S. France, Morocco, etc. p. 74 spp. n.; (*Stictancyrus* subgen. n. p. 65) figs., SCHEERPELTZ Norsk ent. Tidsskr. 8.

Anelobura (?) *minima* sp. n. Selangor p. 105, CAMERON Ann. Mag. nat. Hist. (12) 3.

Arpediomimus kronii Kiesenw. (= *Omalium longiceps* Broun) p. 182 figs., GOURLAY Trans. Proc. roy. Soc. N.Z. 78.

Astenus nevermanni, *angustipennis* spp. n. Costa Rica p. 14, BERNHAUER Zool. Anz. 138 1942.—*A. noctivagans* sp. n. p. 226; *montanellus* var. n. *terminatus* p. 227 Ivory Coast, CAMERON Mém. Mus. Hist. nat., Paris (N.S.) 20 1948.—*A. machadoi*, *epipleuralis*, *angolensis* spp. n. Angola p. 120, CAMERON Publ. cult. Mus. Dundo no. 7.

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Belonuchus sericeicollis sp. n. Belg. Congo p. 43, CAMERON t.c.—*B. laevipennis* sp. n. Costa Rica p. 25, BERNHAUER Zool. Anz. 138 1942.

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Bolitobius affinis sp. **n.** Selangor p. 25, CAMERON Ann. Mag. nat. Hist. (12) 3.

Borboropora africana sp. **n.** Belg. Congo p. 49, CAMERON Explor. Parc nat. Albert, Miss. de Witte fasc. 59.

Brachida gratella sp. **n.** Selangor p. 35, CAMERON Ann. Mag. nat. Hist. (12) 3.

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Deroleptus impressipennis sp. **n.** Perak p. 124; *terminalis* Cam., *excellens* Cam. from *Orphebius* p. 125, CAMERON Ann. Mag. nat. Hist. (12) 3.

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Gnypeta (*Gnypetalia*) *parva* sp. n. Selangor p. 108, CAMERON t.c.—*G. congoana* sp. n. Belg. Congo p. 54, CAMERON Explor. Parc nat. Albert, Miss. de Witte fasc. 59.

Gyrophaena (*Phanerota*) *delamarei*, (*P.*) *pauliani* spp. n. Ivory Coast p. 232, CAMERON Mém. Mus. Hist. nat., Paris (N.S.) 20 1948.—*G. tropica* Cam., *antennata* Cam. in subgen. *Allocota* p. 38 (note); (*Allocota*) *ischnocera* p. 36, (*A.*) *excellens*, (*A.*) *subexcellens* p. 37, (*G.*) *peraffinis* p. 39, (*G.*) *rufescens* p. 40, (*G.*) *confusa* p. 89, (*G.*) *furcifera*, (*G.*) *kutuensis* p. 90, (*G.*) *infantilis*, (*G.*) *fraseri* p. 91, (*G.*) *rubida* p. 92, (*G.*) *nigrans*, (*Phaenogryra*) *lucens* Selangor, (*G.*) *raubensis* Pahang p. 93 spp. n.; key to spp. based on ♂♂ p. 38, CAMERON Ann. Mag. nat. Hist. (12) 3.

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Heterodoxa gen. n. (Aleocharini), *secreta* sp. n. New Zealand p. 25, CAMERON Ent. mon. Mag. 86.

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noides p. 117 spp. n. Angola, CAMERON Publ. cult. Mus. Dundo no. 7.

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Mimoplantria gen. n. (Myrmeconiini), *ruficollis* sp. n. Belg. Congo p. 67, CAMERON Explor. Parc nat. Albert, Miss. de Witte fasc. 59.

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Pseudastilbus gen. n. for *Zyras neptunus* Cam. (type), *Astilbus preangeranus* Cam. p. 124, CAMERON Ann. Mag. nat. Hist. (12) 3.

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Pselaphidae of East Africa, JEANNEL Mém. Mus. Hist. nat., Paris (N.S.) 29 1949 pp. 1-226, 103 figs.

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Pseudoplectus Reitt. (= *Hypoplectus* Raffr.); *crassipes* sp. n. Belg. Congo p. 263 figs., JEANNEL Ann. Mus. Congo belge (Sér. 8vo) Sci. zool. 2 1949.

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Xenobythus serullazi subsp. n. *chobauti* France p. 204, JEANNEL Fn. de France 53.

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Zethinus (*Zethinellus* subgen. n. p. 31), JEANNEL Ann. Mus. Congo belge (Sér. 8vo) Sci. zool. 2 1949.

Zethopsinus gen. n. for *Zethopsis* *major* Raff., etc. p. 22; *punctifrons* n.n. for *puncticeps* Raff. 1913 nec 1904 (from *Zethopsis*) p. 24 figs., JEANNEL Mém. Mus. Hist. nat., Paris (N.S.) 29 1949.—*Z. bredoi* p. 29, *collarti* p. 260, *laevifrons* p. 261 spp. n. Belg. Congo figs., JEANNEL Ann. Mus. Congo belge (Sér. 8vo) Sci. zool. 2 1949.

Zethopsis major see *Zethopsinus*; *puncticeps* see *Z. punctifrons*.

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Euconnus (*Tetramelus*) *aelurus* sp. n. Maritime Alps p. 48 figs., BONADONA Rev. franç. Ent. 17.

Euthia Swedish spp. pp. 120–123 figs., PALM & BERGVALL Ent. Tidskr. 71.

SILPHIDAE (LEPTINIDAE).

Silphidae of the Philippines, ARNETT Proc. ent. Soc. Wash. 52 pp. 63–69, 6 figs.

Bathysciola pumilio larva p. 121 figs., FRANCISCOLO Ann. Mus. Stor. nat. Genova 64.

Boldoria keys to subgenn. & spp. p. 98, distribution list p. 101 figs., PAVAN & RONCHETTI Mem. Soc. ent. ital. 29.—*B.* (*Pseudoboldoria*) *barii* p. 22, *alticola* p. 23 spp. n. Italy; key to Italian spp. of subgen. *Pseudoboldoria* p. 26 figs., FOCARILE Boll. Soc. ent. ital. 80.

Catops hidakai sp. n. Japan p. 32 figs., JEANNEL Rev. franç. Ent. 17.

Choleva vornatscheri sp. n. Austria p. 31 figs., SCHWEIGER Ent. Bl. 45–46.—*C. avivorus* see *Paracatops antipodum*.

Cytodromus henroti sp. n. France p. 77 figs., JEANNEL Publ. Mus. Hist. nat., Paris no. 10 1948.

Diaprysius du-caillari sp. n. p. 86; *mazaurici* subsp. n. *lussanensis* p. 87 France figs., JEANNEL op. cit. no. 8 1947.

Leonhardella revision of spp. of Dinaric Alps pp. 89–100, key to spp. p. 89; (*Leonhardellina* subgen. n. p. 90); (s. str.) *montenegrina* sp. n. p. 93; (*L.*) *antennaria* subssp. n. *acutangula*, *brevis* p. 95 Montenegro, JEANNEL op. cit. no. 10 1948.

Leonhardellina subgen. n. see *Leonhardella*.

Nicrophorus apo sp. n. Philippines p. 67 figs., ARNETT Proc. ent. Soc. Wash. 52.—*N.* (*Necrophorus*) systematic history p. 2, THÉODORIDES Bull. Inst. Sci. nat. Belg. 26 no. 52.

Oiceoptoma (*Thanatophilus*) *viridis* Mots. (= *Silpha coelestis* Dohrn) p. 63, ARNETT Proc. ent. Soc. Wash. 52.

Oresigenus gen. n., *jaspei* sp. n. Spain p. 73, JEANNEL Publ. Mus. Hist. nat., Paris no. 10 1948.

Paracatops antipodum Kirsch (= *Choleva avivorus* Broun) p. 188 figs., GOURLAY Trans. Proc. roy. Soc. N.Z. 78.

Pisidiella kosswigi sp. n. Anatolia p. 14, JEANNEL Publ. Mus. Hist. nat., Paris no. 8 1947. [Cf. Z.R. 84 1947 p. 208.]

Ptomaphagus (*Adelops*) *carolinensis* sp. n. S. Carolina p. 2 figs., SCHWEIGER Ark. Zool. 42B no. 1.—*P.* (*Ptomaphagus*) revision of N. American spp. pp. 95–104, key p. 96; (*Adelops*) *brevior* p. 98, (*A.*) *henroti* (with subsp. n. *ellipticus*), (*A.*) *laticornis* p. 102 spp. n.; (*A.*) *valentini* subssp. n. *jonesi*, *longicornis* p. 103 U.S.A. figs., JEANNEL in JEANNEL & HENROT Publ. Mus. Hist. nat., Paris no. 12 1949.

Royerella (*R.*) *henroti* sp. n. France p. 76 figs., JEANNEL Publ. Mus. Hist. nat., Paris no. 10 1948.

Silpha coelestis see *Oiceoptoma viridis*.

Speonomus spp. of French West Pyrenees pp. 65–74; *ochsi*, *sioberi* p. 68, *alberti* p. 70, (*Phacomorphus*) *intermedius* p. 76, *alticola* spp. n.; *gaudini* subsp. n. *fouresi* p. 79; *ochsi* subsp. n. *asaspensis* p. 80 Fr. Pyrenees figs., COIFFAIT Publ. Mus. Hist. nat., Paris no. 8 1947.—*S.* (*S.*) *bourgoini* p. 89 (with subsp. n. *pachycenus* p. 90), (*S.*) *pierreui* p. 90

spp. n. Fr. Pyrenees; phylogeny of spp. p. 92; *bourgoini*, *siöberi* larvae p. 98 figs., JEANNEL Publ. Mus. Hist. nat., Paris no. 8 1947.

Troglodromus bucheti subsp. **n.** *colasi* p. 29; *perrotti* sp. **n.** p. 31 (with subsp. **n.** *colbranti* p. 32) Alpes Maritimes figs., BONADONA Publ. Mus. Hist. nat., Paris no. 10 1948.

CORYLOPHIDAE.

Corylophidae of Africa, PAULIAN Mém. Inst. franç. Afr. noire no. 12, 126 pp. 86 figs.

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Ptilium myrmecophilum, exaratum, modestum characters p. 217 figs., LUNDBLAD K. svenska Vetensk-Akad. Avhand. Natursk. no. 6.

Ptinella africana sp. n. Ivory Coast p. 66 fig., PAULIAN & DELAMARE-DEBOUTTEVILLE Publ. Mus. Hist. nat., Paris no. 10 1948.

SCAPHIDIIDAE.

Scaphidium longicolle var. n. *kudatense, bicoloripes* Borneo p. 12, PIC Echange 64 1948.

Scaphosoma impressipenne sp. n. Congo p. 10, PIC Echange 63 1947.

? *Toxidium brevipenne* sp. n. Ivory Coast p. 10, PIC t.c.

HISTERIDAE.

List of Histerids of Lyon region, AUDRAS & THÉROND Bull. Soc. linn. Lyon 19 pp. 138–143.

Sternocoelis incisus subsp. n. *mendizabali* Spain p. 578 figs., COBOS Bol. Soc. esp. Hist. nat. 47.

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Nitidulidae of Aïr, Fr. Sudan, LECHANTEUR Mém. Inst. franç. Afr. noire no. 10 p. 182.

Meligethes criticism of Easton's nomenclatorial changes p. 324, BALFOUR-BROWNE Ent. mon. Mag. 86.—*M. nanus* characters p. 44; *meruensis* n.n. for *aethiops* Grouv. nec Latr.;

confertus Rtr. (= *confusus* Grouv. (error), *edmundi* Plav.); *erythropus* author Marsh. 1802 nec Gyll. 1808 p. 308; *bohemani* n.n. for *subtilis* Boh. nec Waltl; *wollastoni* n.n. for *virescens* Thoms. nec Woll. p. 309, EASTON Ent. mon. Mag. 86.

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Cucujidae of Aïr, Fr. Sudan, LECHANTEUR Mém. Inst. franç. Afr. noire no. 10 p. 182.

Airaphilus peyerimhoffi sp. n. Spain p. 586 figs., COBOS Bol. Soc. esp. Hist. nat. 47.

Platamops gounellei, laticollis, mediofasciatius spp. n. Brazil p. 11, PIC Echange Num. spéc. (Opusc. mart. XII) 1944.

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Key to Cossyphodidae of French Equatorial Africa, BASILEWSKY Rev. Zool. Bot. afr. 43 p. 185.

Cossyphodes kundelunguensis sp. n. Belg. Congo p. 240 fig., BASILEWSKY Rev. Zool. Bot. afr. 43.—*C. uviranus* sp. n. Belg. Congo p. 59, BASILEWSKY op. cit. 44.

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Erotylidae of Parc nat. Albert, Belg. Congo, DELKESKAMP Explor. Parc nat. Albert, Miss. de Witte fasc. 70 pp. 9-12.

Catalogue of Erotylidae in collections of Inst. Ecol. Exp. agric. Rio de Janeiro, GUÉRIN Bol. Inst. Ecol. Exp. agric. Rio de J. no. 8 1948 23 [+] pp. 2 pls.

Systematic notes on Japanese Erotylids, NAKANE Ent. Rev. Jap. 5 pp. 6-13, 3 figs.

Brachysphaenus sedecimpustulatus var. n. *sanguinans*; *goianus* sp. n. Brazil p. 9 figs., GUÉRIN Bol. Inst. Ecol. Exp. agric. Rio de J. no. 8 1948.

Episcaphula senegalensis subsp. n. *connectens* Tanganyika p. 12, DELKESKAMP Explor. Parc nat. Albert, Miss. de Witte fasc. 70.

Erotylus bicinctus p. 13, *quadrimaculatus* p. 15 spp. n. Brazil figs., GUÉRIN Bol. Inst. Ecol. Exp. agric. Rio de J. no. 8 1948.

Megalodacne lewisi sp. n. Loochoo Is. p. 12 fig., NAKANE Ent. Rev. Jap. 5.

Plagiopisthen characters pp. 105-112; key to African spp. and subspp. p. 112; list p. 115 figs., DELKESKAMP Rev. Zool. Bot. afr. 44.

Rhynchoritoma divisa further description p. 9, DELKESKAMP Explor. Parc nat. Albert, Miss. de Witte fasc. 70.

Tritoma barbara sp. n. Belg. Congo p. 10, DELKESKAMP t.c.—*T. shimoyamai* sp. n. Japan p. 15 fig., CHŪJŌ & NAKANE in CHŪJŌ Ent. Rev. Jap. 5.—*T. asahinai* sp. n. Japan p. 10 fig., NAKANE Ent. Rev. Jap. 5.

ENDOMYCHIDAE.

Anagaricophilus concinnus sp. n. Mauritius p. 142 figs., VINSON Proc. R. ent. Soc. Lond. (B) 19.

Perrisia brevis var. n. *theresae* Algeria p. 1, PIC Echange Num. sp. (Opusc. mart. XII) 1944.

Trochoideus dalmani var. n. *junctus*; *cruciatus* var. n. *semiobliteratus* Madagascar p. 11, PIC Echange 66.

COCCINELLIDAE.

External morphology of larvae of Epilachninae, KAPUR Bull. ent. Res. 41 pp. 161-208, 1 pl. 22 figs.

Coccinellidae of Aïr, Fr. Sudan, KAPUR Mém. Inst. franç. Afr. noire no. 10 p. 183.

Coccinellidae, II, of Parc nat. Albert, Belg. Congo (key to African Scymnini p. 70), MADER Explor. Parc nat. Albert, Miss. de Witte fasc. 34 136 pp. 36 figs.

Adalia bipunctata ab. n. *veselyi* Bohemia p. 21, ROUBAL Acta Soc. ent. Čsl. 47.

Adonia variegata secondary sex differences p. 238 figs., POPOVICI-BAZNOSANU Zool. Anz. 142 1943.

Afissa dumerili larva p. 197 figs., KAPUR Bull. ent. Res. 41.

Chnootriba similis subsp. *tellini* larva p. 200 figs., KAPUR t.c.

Coccinella septempunctata secondary sex differences p. 236 figs., POPOVICI-BAZNOSANU Zool. Anz. 142 1943.

Coeliaria erythrogaster larva p. 592 figs., DA COSTA LIMA Rev. Ent., Rio de J. 21.

Cyclonedea zischkai sp. n. Bolivia p. 40, MADER Wien. ent. Rdsch. 2.

Cynegetis impunctata larva p. 195 figs., KAPUR Bull. ent. Res. 41.

Epilachna key to 4th-instar larvae p. 166, larval descriptions pp. 168-192 figs., KAPUR t.c.

Merma mediata larva p. 204 figs., KAPUR t.c.

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Stethorus weisei sp. n. Belg. Congo p. 67 figs., MADER Explor. Parc nat. Albert, Miss. de Witte fasc. 34.—*S. punctillum*, *picipes* characters p. 200, BROWN Canad. Ent. 82.—*S. indira* sp. n. Calcutta p. 148 figs., KAPUR Proc. R. ent. Soc. Lond. (B) 19.

Subcoccinella vigintiquatuorpunctata larva p. 192 figs., KAPUR Bull. ent. Res. 41.

DERMESTIDAE.

Dermestidae of Air, Fr. Sudan, PIC Mém. Inst. franç. Afr. noire no. 10 pp. 181–182.

Anthrenus makólskii sp. n. Poland p. 187 figs., MROCKOWSKI Ann. Mus. zool. polon. 14.

Attagenus amurensis Siberia, *sikimensis* India, *insignatus* Abyssinia, *madoni* Senegal, *unifasciatus* S. Africa, *apicalis* p. 7, *asmaranus* p. 8 Eritrea spp. n., PIC Echange Num. spéc. (Opusc. mart. VIII) 1942.—*A. grandjeani* Mozambique p. 9, *diverse signatus* S. Africa p. 10 spp. n., PIC op. cit. VIII 1942.

Cryptorhopalum vagesignum Brazil, *atrum* Fr. Guiana p. 8, *minor*, *semihirsutum* Colombia p. 9, *rufum* p. 8, *4-signatum*, *grandjeani*, *trisignatum* p. 9, *infasciatum* p. 10 spp. n.; *cleryi* var. n. *guerinii* p. 9 Peru, PIC op. cit. VII 1942.

Dermestes impressipennis sp. n. Madagascar p. 9, PIC op. cit. VIII 1942.—*D. székessyi* Hungary p. 61, *kaszabi* Dalmatia etc. p. 64 spp. n. figs., KALIK Folia ent. hung. (N.S.) 3.—*D. (D.) palmi* sp. n. Sweden p. 162 figs., SJÖBERG Ent. Tidskr. 71.

Hemirhopalum elongatum Brazil, *curtum* Bolivia spp. n. p. 8, PIC Echange Num. spéc. (Opusc. mart. VII) 1942.

Telopes uninotatus sp. n. E. Africa p. 6, PIC t.c.

Trogoderma rufonotatum Peru, *submarginatum* Argentina, *unifasciatum* India spp. n. p. 6, PIC t.c.—*T. congoana* sp. n. Belg. Congo p. 356, PIC Rev. Zool. Bot. afr. 43.

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Epichorius see *Liochoria*; *aucklandiae* see *L. pedinoides*.

Limnichus rufimembris sp. n. Madagascar p. 2, PIC Echange Num. spéc. (Opusc. mart. IV) 1941.

Liochoria Pasc. (= *Epichorius* Kirsch); *pedinoides* Blanch. (= *sumptuosa* Broun, *E. aucklandiae* Kirsch) p. 190 figs., GOURLAY Trans. Proc. roy. Soc. N.Z. 78.

Pedilophorus nitidus ab. *nigricans* colour p. 7, GUFFROY Bull. Soc. Sci. nat. Seine-et-Oise (4) 1 1948.

Pelocherops madecassus sp. n. Madagascar p. 2, PIC Echange Num. spéc. (Opusc. mart. IV) 1941.

DRYOPIDAE (PARNIDAE).

E. African Dryopidae, DELÈVE
Mém. Mus. Hist. nat. Paris (N.S.) **19**
1945 pp. 323–330, 4 figs.

Keys to Dryopoidea of Nevada,
LA RIVERS Wasmann J. Biol. **8**
pp. 97–111.

Helminthopsis proxima sp. n. Kenya
p. 325 figs., DELÈVE Mém. Mus. Hist.
nat. Paris (N.S.) **19** 1945.

Microdinodes jeanneli p. 327, *para-*
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DELÈVE t.c.

Potamodytes bispinosus sp. n.
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ler Ent. **34**.

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JEANNEL Rev. franç. Ent. **17**.

HYDROPHILIDAE.

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Explor. Parc nat. Albert, Miss. de
Witte (1933–1935) fasc. 63, 84 pp.
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Hydrophilidae of N. Rhodesia,
BALFOUR-BROWNE Occ. Pap. Mus.
S. Rhod. **2** pp. 382–399, 13 figs.

Hydrophilids of Aïr, Fr. Sudan,
LEGROS Mém. Inst. franç. Afr. noire
no. 10 pp. 215–217.

Hydraenidae of the "Mission
scientifique de l'Omo", D'ORCHY-
MONT Mém. Mus. Hist. nat., Paris
(N.S.) **27** 1948 pp. 29–62, 2 pls.

Preliminary list of Hydrophilidae
of Iowa, STATLER & JAQUES Proc.
Iowa Acad. Sci. **56** 1949 p. 400.

Amphiops lasiocides Rég. (= *sphaero-*
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BROWNE Occ. Pap. Mus. S. Rhod. **2**.

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Albert, Miss. de Witte (1933–1935)
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Parastromus cristatus further description p. 35 figs., BALFOUR-BROWNE t.c.

Parhydraena characters p. 29; (*Pseudhydraena* subgen. n. p. 32); (s. str.) *rugosa*, (*P.*) *similis* spp. n. Kenya p. 34 figs., d'ORCHY-MONT Mém. Mus. Hist. nat., Paris (N.S.) 27 1948.

Pelocyon gen. n. for *Oosternum jeannelli* d'Orchymont p. 36 figs., BALFOUR-BROWNE Explor. Parc nat. Albert, Miss. de Witte (1933-1935) fasc. 63.

Pigrillum wittei sp. n. Belg. Congo p. 44 figs., BALFOUR-BROWNE t.c.

Prosthetops kenyensis sp. n. Kenya p. 56 figs., d'ORCHY-MONT Mém. Mus. Hist. nat., Paris (N.S.) 27 1948.

Pseudhydraena subgen. n. (type *similis* sp. n.) see *Parhydraena*.

Pyretus gen. n. p. 50, *gratus* sp. n. Belg. Congo p. 51 figs., BALFOUR-BROWNE Explor. Parc nat. Albert, Miss. de Witte (1933-1935) fasc. 63.

Quadristernum gen. n. p. 38, *africanum* sp. n. Belg. Congo p. 39 figs., BALFOUR-BROWNE t.c.

Sphaeridium bisinuatum p. 23, *abductum* p. 25 spp. n. Belg. Congo figs., BALFOUR-BROWNE t.c.—*S. fallaciosum* p. 388, *dolum* p. 390 spp. n. N. Rhodesia figs., BALFOUR-BROWNE Occ. Pap. Mus. S. Rhod. 2.

Tectoasternum brunneum sp. n. Belg. Congo p. 40 figs., BALFOUR-BROWNE Explor. Parc nat. Albert, Miss. de Witte (1933-1935) fasc. 63.

HELODIDAE (CYPHONIDAE).

Cyphon unguiculatus Italy, *buceros* Caucasus p. 2, *consobrinus* Amur p. 3, *wuorentausi* Vladivostok p. 4 spp. n.; *ussuricus* ♀ p. 5 figs., NYHOLM Ark. Zool. 42A no. 24.—*C. ruficeps* further description p. 199; *furcillatus* ♀ p. 201 figs., NYHOLM Ark. Zool. (2) 1.—*C. signatipenne*, *corumbanum* Brazil, *achardi* Guiana spp. n. p. 3, PIC Echange Num. spéci. (Opusc. mart. IV) 1941.—*C. coomani* p. 7, *tonkineus* p. 8 spp. n. Tonkin, PIC op. cit. VI 1942.

Elodes minuta varr. n. *discicollis*, *theresae* France p. 1, PIC op. cit. IV 1941.

Ptilodactyla multiimpressa p. 12, *multicostata*, *fruhstorferi*, *forteimpressa* Brazil, *lojaensis* Ecuador, *humidens* Colombia, *compressa* Peru spp. n. p. 16, PIC Echange 63 1947.—*P. triimpressa* sp. n. Brazil p. 12, PIC Echange 64 1948.

Scirtes semicinctus sp. n. Mexico p. 3, PIC Echange Num. spéci. (Opusc. mart. IV) 1941.—*S. nodieri* sp. n. Guiana p. 8, PIC op. cit. VI 1942.—*S. nigromaculatus* sp. n. S. India p. 7, PIC op. cit. IX 1943.

DASCILLIDAE.

Artematopus apicalis sp. n. Colombia p. 8, PIC Echange Num. spéci. (Opusc. mart. VI) 1942.

Drupeus testaceipes Japan, *marginalis* India spp. n.; *notatithorax* var. n. *theresae* Tonkin p. 1, PIC op. cit. XIII 1944.

RHIPICERIDAE (SANDALIDAE).

Callirhipis attenuatus p. 3, *rollei* p. 4, *particularis* p. 5 Borneo, *humeralis* Sumbawa, *bogotensis* Colombia p. 4, *latipennis* Solomon Is. p. 5 spp. n., PIC Echange Num. spéci. (Opusc. mart. XI) 1943.

Cebriorhipis breviramus Borneo, *rufescens* Malacca spp. n. p. 3, PIC t.c.

Ennometes ruficornis sp. n. Malacca p. 3, PIC t.c.

Semianus pauloplicatus sp. n. Borneo p. 5, PIC t.c.

nated type p. 36; *arizonicus* sp. n. Arizona p. 38, FISHER t.c.

BOSTRYCHIDAE.

Revision of N. American Bostrychidae, FISHER Misc. Publ. U.S. Dep. Agric. no. 698 157 pp.

Bostrychidae of Air, Fr. Sudan, VILLIERS Mém. Inst. franç. Afr. noire no. 10 pp. 198-199.

Bostrychidae of Parc nat. Albert, Belg. Congo, VRYDAGH Explor. Parc nat. Albert, Miss. de Witte fasc. 70 pp. 13-14.

Amphicerus bicaudatus Say designated type; subgen. *Schistoceros* Lesne *bimaculatus* Oliv. designated type p. 67; (*A.*) *bicaudatus* Say (= *gracilis* Casey) p. 68; (*A.*) *cornutus* Pall. (= *maritimus* Casey) p. 70; (*Schistoceros*) *simplex* Horn (= *grandicollis* Casey) p. 74, FISHER Misc. Publ. U.S. Dep. Agric. no. 698.

Apatides fortis LeC. (= *fortis* Casey, *puncticeps* Casey, *pollens* Casey) p. 96, FISHER t.c.

Bostrychoplites cornutus Oliv. designated type p. 65, FISHER t.c.

Bostrychopsis parallelus Lesne designated type p. 98, FISHER t.c.

Dendrobiella aspera LeC. designated type p. 128, FISHER t.c.

Dinoderus sp. egg p. 100; sex differential structure in pupal stages p. 102 fig., AZIZ & SITARAMAN Proc. Indian Acad. Sci. **28B** 1948.—*D. bifoveolatus* larva p. 1 figs., MATHUR Indian J. Ent. **10**.—*D. opacus* see *Stephanopachys rugosus*; *pacificus* see *S. substriatus*; *parvulus* see *S. hispidulus*.

Heterobostrychus aequalis Waterh. designated type p. 83, FISHER Misc. Publ. U.S. Dep. Agric. no. 698.

Lichenophanes varia Ill. designated type p. 76; *arizonicus* sp. n. Arizona p. 77, FISHER t.c.

Micrapate dinoderoides Horn designated type p. 87; *mexicana* Mexico p. 91, *bilobata* Texas p. 94 spp. n., FISHER t.c.

Octodesmus episternalis Lesne designated type p. 115, FISHER t.c.

Prostephanus punctatus Say design-

Scobia chevrieri Villa designated type p. 104; *lesnei* p. 106, *monticola* p. 108 spp. n. U.S.A., FISHER t.c.

Stephanopachys rugosus Oliv. (= *Dinoderus opacus* Casey) p. 43; *substriatus* Payk. (= *D. pacificus* Casey) p. 45; *conicola* sp. n. Arizona, California p. 48; *hispidulus* Casey (= *D. parvulus* Casey) p. 50, FISHER t.c.—*S. substriatus* all stages p. 286 figs., SCHURR-MICHEL Z. angew Ent. 32.

Xylion securifer Lesne designated type p. 134, FISHER Misc. Publ. U.S. Dep. Agric. no. 698.

Xylobiops basilaris Say designated type p. 122, FISHER t.c.

Xyloblaptus prosopidis sp. n. California p. 131, FISHER t.c.

Xylonites see *Xylopertha*.

Xylopertha Guér.-Mén. (= *Xylopertha* Lesne) p. 143, FISHER Misc. Publ. U.S. Dep. Agric. no. 698—*X. picea*, *crinitarsis*, *scutula* see *Xyloperthella*.

Xyloperthella gen. n. for *Xylopertha picea* Oliv. (type), *crinitarsis* Imh., *scutula* Lesne p. 116, FISHER Misc. Publ. U.S. Dep. Agric. no. 698.

Xyloprista hexacantha Fairm. designated type p. 118, FISHER t.c.

Xylopsocus capucinus F. designated type p. 139, FISHER t.c.

Xylothrips flavipes Ill. designated type p. 135, FISHER t.c.

LYCTIDAE.

Lyctidae of Air, Fr. Sudan, VILLIERS Mém. Inst. franç. Afr. noire no. 10 p. 198.

ANOBIIDAE (ASPIDIPHORIDAE).

Anobium rufipes, *thomsoni* characters p. 200 figs., LUNDBLAD K. svenska VetenskAkad. Avhand. Natursk. no. 6.—*A. marginaticolle* sp. n. India p. 9, PIC Echange Num. spéc. (Opusc. mart. IX) 1943.

Clada inhumeralis Tanganyika p. 8, *rufescens* Cochin-China p. 9 spp. n., PIC t.c.—*C. villiersi* sp. n. Fr. Sudan p. 181, PIC Mém. Inst. franç. Afr. noire no. 10.—*C. curtipennis* sp. n. S. Africa p. 358, PIC Rev. Zool. Bot. afr. 43.

Dorcatoma ghesquierei sp. n. Belg. Congo p. 358, PIC t.c.—*D. congoana* sp. n. Congo p. 11 (with var. n. *nodieri* Senegal p. 12); *vaulogeri* var. n. *latrix* Morocco p. 14, PIC Echange 64 1948.

Ernobia indicus sp. n. Sikkim p. 10, PIC Echange Num. spéc. (Opusc. mart. IX) 1943.

Falsopetalium gen. n., *apicale* sp. n. Congo p. 11, PIC Echange 64 1948.

Falsoptilinus gen. n., *modestus* sp. n. Congo p. 10, PIC Echange 66.

Gastrallus multistriatus sp. n. S. India p. 9, PIC Echange Num. spéc. (Opusc. mart. IX) 1943.

Grynobius excavatus Kugel. (= *kiesewetteri* Edw.) aedeagus figured p. 127, BUCK Ent. mon. Mag. 86.

Hedobia (*Pseudoclada*) *latipennis* sp. n. Morocco p. 9, PIC Echange Num. spéc. (Opusc. mart. IX) 1943.

Lasioderma japonica Japan, *formosana* Formosa p. 10, *robusta* Madagascar p. 11 spp. n., PIC t.c.

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Metholcus minutissimus sp. n. S. India p. 8, PIC t.c.—*M. multistriatus* var. n. *seydeli*; *sinuaticollis* sp. n. Belg. Congo p. 357, PIC Rev. Zool. Bot. afr. 43.

Priotoma ruficeps sp. n. Brazil p. 11, PIC Echange 64 1948.

Ptilinus grandis sp. n. Belg. Congo p. 357, PIC Rev. Zool. Bot. afr. 43.

Ptinomorphus imperialis varr. n. *nigronotatus*, *x-notatus* France p. 2, PIC Echange Num. spéc. (Opusc. mart. VIII) 1942.

Stagetus collarti sp. n. Belg. Congo p. 358, PIC Rev. Zool. Bot. afr. 43.

Thaptor multistriatus Fr. Guiana, *robustus* Guatemala, *minutissimus* p. 5, *anobioides* Brazil, *boliviensis* Bolivia, *peruvianus* Peru p. 6 spp. n.,

PIC Echange Num. spéc. (Opusc. mart. VII) 1942.

Trichodesma multinotata S. India, *innotata* Burma spp. n. p. 8, PIC op. cit. IX 1943.

Xyletinus paulostriatus, *fouqueti* spp. n. India p. 9, PIC t.c.—*X. rufiventris* Zanzibar, *subattenuatus* Congo, *inaequalis* Brazil spp. n. p. 12, PIC Echange 64 1948.

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Chilenogenius gen. n. for *Trigonogenius* *aeneus* PIC p. 10, PIC Echange 66.

Niptomimus subgen. n. (type *subelongatus* sp. n.) see *Niptus*.

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Ptinus (*Eutaphrus*) *diversicollis* var. n. *panousei* Morocco p. 1, PIC Echange 64 1948.—*P. vanhillei* sp. n. S. Africa p. 10; *testaceus* var. n. *densepubens* France; *testaceipes* var. n. *monrosi* Argentina p. 11, PIC Echange 66.

Trigonogenius aeneus see *Chilenogenius*.

CLERIDAE.

Cleridae of Lower California, BARR Proc. Calif. Acad. Sci. (4) 24 pp. 485–519.

Catalogue of Cleridae, CORPORAAL Coleopt. Catal. (Suppl.) pars 23 (2nd ed.) 373 pp.

Critical notes on Gistel's Cleridae in "Achthundert und zwanzig neue . . . Thiere" and Gay's "Historia de Chile" 1849 Zool. 4, pls. 9 and 10, CORPORAAL Ent. Ber., Amst. 13 pp. 30–31.

Cleridae of Aïr, Fr. Sudan, PIC Mém. Inst. franç. Afr. noire no. 10 pp. 180–181, 1 fig.

Aulicus linsleyi sp. n. Lower California p. 511, BARR Proc. Calif. Acad. Sci. (4) 24.

Basilewskyus gen. n., *deheyni* sp. n. Belg. Congo p. 154, PIC Rev. Zool. Bot. afr. 43.

Burgeoneus gen. n., *freynei* sp. n. Belg. Congo p. 158, PIC t.c.

Callotillus vafer Wolc. a subsp. of *elegans* Er. p. 490, BARR Proc. Calif. Acad. Sci. (4) **24**.

Cephaloclerus ventralis, *scheitzae* spp. n. Belg. Congo p. 161, PIC Rev. Zool. Bot. afr. **43**.

Cladiscopallenius gen. n. for *Cladiscus seyrigi* PIC p. 11, PIC Echange **65** 1949.

Cladiscus apicalis sp. n. Indo China p. 13, PIC t.c.—*C. seyrigi* see *Cladiscopallenius*.

Clerus militaris var. n. *rubripennis* Brazil p. 5, PIC Echange Num. spéc. (Opusc. mart. I) 1940.

Corinthicus peninsularis Schaeff. (= *sinaloae* Chap.) p. 512, BARR Proc. Calif. Acad. Sci. (4) **24**.

Corynetes analis var. n. *obscurimembris*, *intermedius* Congo; *nigritarsis* sp. n. S. Africa p. 1, PIC Echange **64** 1948.

Cregya chevrolati n. n. for *circumcinctum* Chevr. nec Dup.; *limbatipennis* n. n. for *conformis* ab. *marginalis* Chev. nec Spin. p. 94, CORPORAAL Ent. Ber., Amst. **13**.

Cylidrus buqueti var. n. *sublineatus* Fr. Sudan p. 180, PIC Mém. Inst. franç. Afr. noire no. 10.

Cymatodera key to spp. of Lower California p. 490; *picipennis* p. 495, *minacis* p. 497, *intermedia* p. 501 spp. n. California, BARR Proc. Calif. Acad. Sci. (4) **24**.—*C. wolcotti* n. n. for *confusa* Wolc. nec Spin.; *spinolai* n. n. for *angustata* Spin. 1844 p. 149 nec p. 142 p. 61, BARR Ent. Ber., Amst. **13**.—*C. modesta* see *Noto-cymatodera*.

Dasyteneclines gen. n., *dasytoides* sp. n. Argentina p. 9, PIC Echange Num. spéc. (Opusc. mart. II) 1941.

Derestenus latefasciatus Bolivia, *apicalis* Guatemala p. 10, *testaceicornis* Panama spp. n.; *limbatus* varr. n. *notaticollis*, *suturalis* Venezuela, *latesuturalis* Bolivia p. 11, PIC t.c.

Dereutes brevenotata, *germaini* p. 9, *brevevittata* (with var. n. *bisignata*), *multisignata*, *latefasciata* p. 10 spp. n. Chile, PIC t.c.—*D. rufipes*, *bilineatus* p. 10, *elongatus* p. 11 spp. n. Chile, PIC op. cit. III 1941.

Eburiphora viridesuturalis, *robusticollis*, *eburneofasciata* p. 7, *diversipennis*, *semirufa*, *griseoapicalis*, *unimaculata*, *angustipennis* p. 8 (with var. n. *semirufa*), *acuminata*, *subacuminata* p. 9 spp. n. Madagascar, PIC op. cit. V 1941.—*E. vadoniana* n. n. for *vadoni* PIC 1949 nec 1936, PIC Echange **65** 1949.

Eburneoclerus gen. n., *ater*, *nigroapicalis*, p. 12, *simoni* p. 16 spp. n. S. Africa, PIC Echange **66**.

Eleale alboapicalis p. 11, *femoralis*, *parallellicollis*, *inlimbata*, *particularis* p. 12, *cyanea*, *plicatithorax* p. 13 spp. n. Australia, PIC Echange Num. spéc. (Opusc. mart. III) 1941.—*E. simplex* var. n. *bicoloricornis* Australia; *speculum* var. n. *tasmanica* Tasmania p. 5, PIC op. cit. VI 1942.

Enoclerus lateluteus PIC (= *laticinctus* White nec Lec.) p. 59, CORPORAAL Ent. Ber., Amst. **13**.—*E. acerbus* Wolc. (= *eximus trullionis* Barr) p. 61; *knabi* Wolc. a sp. not var. of *ichneumoneus* F.; *virginensis* Schaeff. a sp. not var. of *rosmarus* Say p. 62, BARR Ent. Ber., Amst. **13**.

Enoplioides notatipes sp. n. Madagascar p. 2, PIC Echange **65** 1949.

Epiclines wittmeri, *trimaculatus* spp. n. Argentina p. 11, PIC Echange **66**.

Erymanthus testaceus p. 159, *variegatus* p. 160 spp. n. Belg. Congo, PIC Rev. Zool. Bot. afr. **43**.

Eucymatodera rufescens sp. n. E. Africa p. 10, PIC Echange **65** 1949.

Eurymetopum diversesignatum, *chilense* spp. n.; *nudatum* varr. n. *undulatum*, *mediointerruptum*; *seminigrum* var. n. *reductum* Chile p. 7, PIC Echange **66**.

Evenoclerus n. n. for *Evenus* Cast. nec Hb. p. 59, CORPORAAL Ent. Ber., Amst. **13**.

Evenus perrieri var. n. *humeralis* Madagascar p. 9, PIC Echange Num. spéc. (Opusc. mart. V) 1941.—See *Evenoclerus*.

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Graptoclerus nigrofasciatus sp. n.
Belg. Congo p. 161, PIC Rev. Zool. Bot. afr. 43.

Gyponyx abyssinicus var. n. separa-
tus Congo p. 4, PIC Echange Num. spéc. (Opusc. mart. I) 1940.—*G. lefevrei* p. 155, *femoralis* p. 156 spp. n. Belg. Congo, PIC Rev. Zool. Bot. afr. 43.—*G. latus* sp. n. S. Africa p. 1, PIC Echange 64 1948.

Ichnea helvolicollis n. n. for *rosei-*
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PORAAL Ent. Ber., Amst. 13.

Isolemidia notatipennis var. n.
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Num. spéc. (Opusc. mart. I) 1940.—*I. brevenotata* sp. n. Uruguay;
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p. 3, PIC op. cit. VII 1942.

Korynetes duboulayi PIC from
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Ber., Amst. 13.

Lebasiella mesosternalis Schaeff.
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XII 1944.

Lissaulicus nigroapicalis, *bicoloripes*
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Loedelia peninsularis sp. n. Lower
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Microtillus gen. n., *luteofasciatus*
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Natalis Cast. validity discussed
p. 60, CORPORAAL Ent. Ber., Amst.
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Notocymatodera modesta Spin. from
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Notostenus perforatus sp. n. Trans-
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Olesterus micans Australia, *bifascia-*
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Omadius dubius n. n. for *javanus*
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Ber., Amst. 13.

Opetiopalpus hintzi n. n. for
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CORPORAAL t.c.—*O. ruficeps* sp. n.
Fr. Sudan p. 180 fig., PIC Mém.
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Opilo atricolor sp. n. Madagascar
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VIII 1942.—*O. nodieri* var. n.
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PIC Echange 65 1949.—*O. brunneotinctus* var. n. *diversenotatus* Madag-
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Kouy-Tcheou p. 15, PIC Echange 66.
—*O. bipartitus* sp. n. Belg. Congo
p. 162, PIC Rev. Zool. Bot. afr. 43.—
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Orthopleura Spin. spelling dis-
cussed p. 61, CORPORAAL Ent. Ber.,
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Orthrius lineatipes Tonkin, (*Pieleus*
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p. 4, PIC Echange Num. spéc.
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Pallenis fulvocaudata p. 3, *quadri-*
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PIC op. cit. VIII 1942.—*P. cyaneocincta*, *albonotata* spp. n. Madagascar p. 105, PIC Ent. Ber., Amst. 13.—*P. bicolorrefasciata* sp. n. Madagascar p. 1, PIC Echange 65 1949.

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Placopterus obscuripes sp. n. Mexico p. 10, PIC Echange Num. spéc. (Opusc. mart. II) 1941.

Plateroclerus laps. cal. for *Plateroclerus* p. 61, CORPORAAL Ent. Ber., Amst. 13.

Plathanocera albopunctata varr. n. *cincta*, *basalis*, *reducta* Belg. Congo p. 159, PIC Rev. Zool. Bot. afr. 43.

Platyclerus insignatus PIC, *luteonotatus* PIC from *Plateroclerus* (lapsus calami) p. 61, CORPORAAL Ent. Ber., Amst. 13.

Priocleromorphus gen. n. p. 23, *flavofasciatus* sp. n. Cairo p. 24, PIC Bull. Soc. Fouad 1er Ent. 34.

Pseudoclerops gibbosus p. 156, *breveruber* p. 157 (with subsp. n. *van-eyeni* p. 158), spp. n. Belg. Congo, PIC Rev. Zool. Bot. afr. 43.

Pseudopallenis araneipes var. n. *lateniger*; *quinquemaculatus* sp. n.; *plicata* var. n. *auratopilosa* Madagascar p. 1, PIC Echange 65 1949.—*P. preapicalis* sp. n. Madagascar p. 1, PIC Echange Num. spéc. (Opusc. mart. V) 1941.

Pujoliclerus gen. n., *modestus* sp. n. Brazil p. 16, PIC Echange 66.

Rhopaloclerus vittatus sp. n. Madagascar p. 9, PIC Echange Num. spéc. (Opusc. mart. V) 1941.

Sallea Chevr. validity discussed p. 60, CORPORAAL Ent. Ber., Amst. 13.

Scrobiger albosignatus sp. n. Australia p. 11, PIC Echange Num. spéc. (Opusc. mart. III) 1941.

Stenoclylidrus theresae p. 1, *sinuaticollis* spp. n.; *apicatus* var. n. *brevemarginatus* p. 2 Madagascar, PIC Echange 65 1949.

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subnigra sp. n. Tanganyika p. 10,
PIC Echange 65 1949.

Sulcopatuleius subgen. n. (type
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Synellapus laticollis sp. n. Mada-
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Teleclerus arcuatefasciatus sp. n.
Belg. Congo p. 153; PIC Rev. Zool.
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Teneroides maculicollis Lew. (= *higo-
nius* Lew.) from *Tenerus* p. 32 figs.,
IGA Ent. Rev. Jap. 5.

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Congo, *schenklingi* Australia, *bin-
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var. n. *notatus* Congo; *nigrocinctus*
var. n. *maublanci* Gabon p. 9, PIC
Echange 64 1948.—*T. conradii* sp. n.
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spp. n. Borneo p. 12, PIC Echange 66.
—*T. maculicollis* (*higonius*) see
Teneroides.

Thanasimus formicarius var.
brioni Pic (=var. *schaeferi* Méq.)
p. 61, CORPOREAL Ent. Ber., Amst.
13.—*T. (Thanasymus)* key to French
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var. *brioni* Pic (=var. *schaeferi*
Méq.) p. 70, MÉQUIGNON Entomolo-
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Tricladus alluaudi varr. n. *notatus*,
fasciatus Madagascar p. 2, PIC
Echange 65 1949.—*T. ater*, *testa-
ceipes* spp. n. Madagascar p. 3, PIC
Echange Num. sp. spéc. (Opusc. mart.
XII) 1944.

Zenithicola cribricollis sp. n.; *aus-
tralis* varr. n. *rufipes*, *major* Australia
p. 11, PIC op. cit. II 1941.

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Malachiids of Air, Fr. Sudan,
PIC Mém. Inst. franç. Afr. noire no.
10 pp. 145–146.

Aiomalachius gen. n., *bisulcatus*
sp. n. Fr. Sudan p. 145, PIC Mém.
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Anthocomus punctaticeps sp. n.
?Cape Province p. 15, PIC Echange 65
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ascar; *inchoatus* var. n. *diverseiceps*
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Attalus panousei sp. n. Morocco
p. 93, PIC C.R. Soc. Sci. nat. Maroc
1950 no. 6.—*A. longicornis* sp. n.
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duced to ab. of *minutus* PIC; *kuscheli*
sp. n. Peru p. 256, WITTMER Rev.
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Dinometopus unifasciatus sp. n.
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p. 998 spp. n. Cape Province, PIC
Ann. Mag. nat. Hist. (12) 3.—*E.
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Hedybius bicoloripes sp. n. S. Africa; *nigrovittatus* var. n. *notatocollis*; *viridipennis* var. n. *reductenotatus* Abyssinia; *limbatipennis* var. n. *uninotatus*, 4-notatus Eritrea p. 2, PIC Echange Num. spéc. (Opusc. mart. XIII) 1944.

Heterolaius dentaticornis sp. n. Cameroons p. 9, PIC op. cit. VIII 1942.

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Pseudocolotes latefasciatus sp. n. Senegal p. 72, PIC Bull. Inst. franç. Afr. noire 12.—*P. uniformis* sp. n. S. Africa p. 15, PIC Echange 65 1949.—*P. minutissimus* sp. n. Congo p. 14, PIC Echange 66.

Psilorynchus bifasciatus var. n. *inapicalis*; *abdominalis* var. n. *prolongatus* Brazil p. 10, PIC Echange 63 1947.

Sphinginopalpus keys to Tropical African spp. p. 321; *notaticornis* Ruwenzori p. 325, *dentiger* Belg. Congo p. 327 spp. n., EVERE Rev. Zool. Bot. afr. 43.—*S. semiopacus* sp. n. Belg. Congo p. 356, PIC Rev. Zool. Bot. afr. 43.

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Antixoon latum sp. n. Argentina p. 16, PIC Echange Num. spéc. (Opusc. mart. XII) 1944.

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Argentina p. 257, WITTMER Rev. Ent., Rio de J. 21.

Dasytes villiersi Mauritania, *cylindricus* Cameroons spp. n. p. 72, PIC Bull. Inst. franç. Afr. noire 12.—*D. (Mesodasytes) kocheri* sp. n. Morocco p. 92, PIC C.R. Soc. Sci. nat. Maroc 1950 no. 6.—*D. flavoapicalis* sp. n. Peru p. 13, PIC Echange Num. spéc. (Opusc. mart. VIII) 1942.

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Haplocnemus caroli sp. n. Morocco p. 1, PIC Echange Num. spéc. (Opusc. mart. IV) 1941.

Henicopus falculifer Fairm. (?= *pilosus* Scop.), *hirtus* synonymy discussed p. 14, MÜLLER Boll. Soc. ent. Ital. 80.

Hypodasutes bupthalmus Baudi (= *gelineki* Reitt.) p. 14, MÜLLER t.c.

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Pagurodactylus longicollis, *flavocollis* p. 999, *limbatus* var. n. *semifasciatus* spp. n.; *limbatus* var. n. *semifasciatus* p. 999, *basicollis* p. 1000 S. Cape Province, PIC Ann. Mag. nat. Hist. (12) 3.

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Diaph[r]on theresae, *latescutellare* p. 3, *malleri* p. 4 Brazil, *armitidgei* America p. 3 spp. *n.*, PIC Echange 65 1949.

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Hansasilis plaumannii ab. *n. obscurior* (also Brazil); *misionensis* sp. *n.* Argentina p. 248, WITTMER t.c.

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Malthesis reductus (with varr. *n. bilineatus*, *innotatus*) Mérida, *diversus* Bolivia spp. *n.* p. 13, PIC Echange 63 1947.

Malthinus sordidus var. *n. brunneosulcatus* Italy p. 10, PIC Echange Num. spéc. (Opusc. mart. I) 1940.

Malthodes latefasciatus Borneo, *pahanganus* Pahang p. 2 spp. n., PIC op. cit. XI 1943.—*M. manevali* sp. n. France p. 1, PIC op. cit. XIII 1944.—*M. (Collartimalthodes) subgen. n.* p. 309), PIC Rev. Zool. Bot. afr. 18 1930.

Microichthyurus diversicornis sp. n. Malaya p. 2, PIC Echange Num. spéc. (Opusc. mart. XI) 1943.

Mimopolemius preapicalis sp. n. no locality p. 10, PIC Echange 66.

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Podabrinus costatipennis, *pendleburyi* (with var. n. *bipartitipes*), *lateniger* (with var. n. *nigrocephalus*) spp. n. Borneo p. 5, PIC Echange Num. spéc. (Opusc. mart. XII) 1944.

Polemius (Brachypolemius) subgen. n.) dimorphus sp. n. Bolivia p. 251, WITTMER Rev. Ent., Rio de J. 21.

Rhagonycha Esch. scope p. 27, McKEY-FENDER Pan-Pacif. Ent. 26.—*R. lindbergi* var. n. *marocana* Morocco p. 16, PIC Echange 65 1949.

Silidius nitidior var. n. *jobiti*; *atrosuturalis* sp. n. Cameroons p. 73, PIC Bull. Inst. franç. Afr. noire 12.

Tylocerus subopacus PIC systematic position discussed p. 3; *morokaensis* p. 4, *pallidipes*, *haveriensis* p. 6, *crassitarsis*, *similis* p. 7 spp. n. New Guinea figs., WITTMER Doriania 1 no. 11.

LYCIDAE.

Revision of and keys to N. American Lygistopterini, GREEN Trans. Amer. ent. Soc. 76 pp. 13–25, 1 pl.

Lycidae of Klapperich's China expedition, II, KLEINE Ent. Bl. 45-46 pp. 21–24.

Adoceta ignita p. 19, *apicalis* p. 20 spp. n. Arizona figs., GREEN Trans. Amer. ent. Soc. 76.

Aplopterus japonicus sp. n. Japan p. 2, PIC Echange Num. spéc. (Opusc. mart. VI) 1942.

Caenioxylobanus bicoloricollis, *subdilatatus* spp. n. Madagascar p. 15, PIC Echange 66.

Calochromus sanguinosus sp. n. China p. 24, KLEINE Ent. Bl. 45-46.—*C. robusticollis* Tibet, atriceps Sunda Is., *pectinicornis* Java p. 4, *wittmeri* Banda, *reductus* Australia p. 5 spp. n., PIC Echange Num. spéci. (Opusc. mart. VII) 1942.—*C. bicoloripes* sp. n. S. India p. 7, PIC op. cit. IX 1943.—*C. impressithorax* p. 14, *laosensis* p. 15 spp. n. Laos, PIC Echange 65 1949.

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Cladophorus nigroareolatus p. 12, *angusteareolatus* p. 13 spp. n. Tonkin, PIC Echange Num. spéci. (Opusc. mart. VI) 1942.

Costatoplateros subgen. n. (type *fortecostatus* sp. n.) see *Plateros*.

Dictyopterus forticornis sp. n. China p. 1, PIC Echange Num. spéci. (Opusc. mart. VI) 1942.

Ditoneces impressicollis, *subreduc-tus* p. 5 spp. n.; *tonkineus* var. n. *discicollis* p. 6 Tonkin, PIC op. cit. VIII 1942.—*D. laticollis* sp. n. Borneo p. 7, PIC op. cit. IX 1943.

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Macrolycus salvazai sp. n. Indo-China p. 5, PIC t.c.

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Plateros (Costatoplateros) subgen. n.) *fortecostatus* sp. n. Brazil p. 5, PIC t.c.—*P. tenebrans* p. 22, *glaber*

p. 23 spp. n. China, KLEINE Ent. Bl. 45-46.—*P. depressicornis, diversocos-tatus, purpureus* Tonkin p. 6, PIC Echange Num. spéc. (Opusc. mart. VIII) 1942.—*P. nathani* sp. n. S. India p. 7, PIC op. cit. IX 1943.

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Lucidina boucardi Lugano, *angusticollis, testaceipes* Borneo, *wallacei* Singapore, *multicostulata* p. 7, *bogorensis* p. 8 Java spp. n., PIC op. cit. XII 1944.—*L. okadai* sp. n. Japan p. 34 fig., NAKANE & OHBAYASHI Ent. Rev. Jap. 1 1949.

Lucidota hickeri p. 10, *antonioi* Paraguay, *subnigra* Colombia, *luteohumeralis* Peru, *clermonti* Brazil p. 11 spp. n., PIC Echange Num. spéc. (Opusc. mart. I) 1940.

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Platylampis bisbinotata sp. n. Brazil p. 2, PIC op. cit. XI 1943.

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Hypocoelus procerulus, cariniceps characters p. 7 figs., PALM Opusc. ent. Lund 15.

ELATERIDAE (PHYLLOCERIDAE,
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Larvae of Lepturoidini, GLEN Smithson. misc. Coll. 111 no. 11, 246 pp. 40 figs.

Elaterids of Aïr, Fr. Sudan, MOUCHET Mém. Inst. franç. Afr. noire no. 10 pp. 183-190, 6 figs.

Aeoloides fleutiauxi sp. n. Fr. Sudan p. 185 fig., MOUCHET Mém. Inst. franç. Afr. noire no. 10.

Agriotes sputator distinguishing larval instars pp. 395-413 figs., BASDEN Bull. ent. Res. 41.—*A. paludum* further description p. 108 figs., BINAGHI Atti Mus. Stor. nat. Trieste 17 1949.

Geraniella n. n. for *Geranus* Sharp nec Bonap. (Aves) p. 192 figs., GOURLAY Trans. Proc. roy. Soc. N.Z. 78.

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Megapenthes chopardi sp. n. Fr. Sudan p. 187 figs., MOUCHET Mém. Inst. franç. Afr. noire no. 10.—*M. fleutiauxi* sp. n. Mauritius p. 143 figs., VINSON Proc. R. ent. Soc. Lond. (B) 19.

Selatosomus (Paranomus) costalis, *guttatus* larvae p. 247 figs., SCHÄERF-FENBERG Zool. Anz. 143 1943.

Sinaptus filiformis var. *atripes*, *leprieuri* France p. 1, PIC Echange Num. spéc. (Opusc. mart. IV) 1941.

Zorochrus villiersi sp. n. Fr. Sudan p. 188 fig., MOUCHET Mém. Inst. franç. Afr. noire no. 10.

BUPRESTIDAE.

Anonymous pamphlet "Buprestidae" attributed to Hope 1836 not published and names in it have no standing, Bull. zool. Nomen. 4 p. 371.

Catalogue of Buprestidae of Shikoku, Japan, CHŪJŌ & KURASAWA Trans. Shikoku ent. Soc. 1 pp. 1-16, 2 figs.

Buprestids of Malaga, Spain, COBOS Bol. Soc. esp. Hist. nat. 47 pp. 433-467, 5 figs.

Revision of Chrysobothrini of Madagascan region, DESCARPENTRIES Nat. malgache 2 pp. 7-45, 1 col. pl. 16 figs.

Buprestidae of Aïr, Fr. Sudan, OBENBERGER Mém. Inst. franç. Afr. noire no. 10 pp. 191-198.

Some Buprestidae from Persia, SALAVATION Ent. Phytopath. appl., Teheran no. 11 pp. 6-11.

Achenodes alluaudi subsp. n. *vadoni* p. 25; *bourgini* p. 26, *militi* p. 37 spp. n. Madagascar figs., DESCARPENTRIES Nat. malgache 2.

Agrilus liragus sp. n. Canada p. 247 figs., BARTER & BROWN Canad. Ent. 81.—*A. geronimoi* sp. n. Arizona p. 90, KNULL Ent. News 61.

Anthaxia rubromarginata Miwa & Chūjō (= *proteus* var. *viridomarginata* M. & C. *primorjensis* Obenb.) p. 3 [in Japanese], KUROSAWA Ent. Rev. Jap. 1 1948.—*A. binotata* abb. n. *roseifrons* Fr. Sudan, *odalisca* Senegal p. 195, OBENBERGER Mém. Inst. franç. Afr. noire no. 10.

Cinyra prosternalis Schaeff. (= *Psiloptera riograndei* Knull) p. 89, KNULL Ent. News 61.

Cryptodactylus auriceps (*gracilis*) see *Toxoscelus*.

Janthe villiersi sp. n. Fr. Sudan p. 196, OBENBERGER Mém. Inst. franç. Afr. noire no. 10.

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Paratyndaris crandalli Knull raised to sp. and not subsp. of *olneyae* p. 89, KNULL Ent. News 61.

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Tetragonoschema tucumana p. 9, monrosi p. 12 spp. n. Argentina figs., COBOS Graellsia 7 1949.

Toxoscelus auriceps Saund. (= *rugicollis* Fish. nec Saund., *japonicus* Obenb., *Cryptodactylus gracilis* Schönf.) from *C.* p. 30, KUROSAWA Ent. Rev. Jap. 5.

TENEBRIONIDAE (BORIDAE,
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TRETOTHORACIDAE).

List of Tenebrionidae of delta of River Llobregat, Barcelona, ESPAÑOL COLL Graellsia 7 1949 pp. 47-48.

Tenebrionidae of the Guinea Islands, W. Africa, GEBIEN Zool. Anz. 138 1942 pp. 106-126, 11 figs.

Tenebrionidae of southern Africa, collected by Univ. California-Transvaal Mus. Exped. 1948 (key to Asiatic and African genn. of Epitragini p. 283, key to genn. & subgenn. of Tentyriini of southern Africa p. 340), KOCH Ann. Transv. Mus. 21 pp. 273-367, 19 pls.

Tenebrionidae of Venezuela, MARCUZZI Mem. Soc. Cienc. nat. La Salle 9 1949 pp. 333-352, 17 figs.

Acestophanus n. n. for *Acestus* Haag nec Leidy p. 67, KOCH Entomologist 83.

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Ambigatus Fairm. reduced to subgen. of *Achanius* q.v.

Amenophis eidmanni sp. n. Fernando Po p. 122 figs., GEBIEN Zool. Anz. 138 1942.

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Aurigena unicolor larva p. 155 fig., GOUGUENHEIM, PERRIER & RUNGS Rev. Path. vég. Ent. agric. Fr. 29.

Blapida luteolineata sp. n. Brazil p. 3, PIC Echange 66.

Blapstinus fairmairei sp. n. Venezuela p. 345 figs., MARCUZZI Mem. Soc. Cienc. nat. La Salle 9 1949; also in Mem. Soc. ent. ital. 29 p. 109.

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Byrsax andamanus var. n. *coomani* Tonkin; *laosensis* sp. n. Laos p. 3, PIC Echange 65 1949.

Calognathus chevrolatii subsp. n. *ebelanzi* S. Africa p. 354 figs., KOCH Ann. Transv. Mus. 21.

Camaria madoni, *transversesulcata* Brazil, *curticornis* Paraguay spp. n. p. 7, PIC Echange Num. spéc. (Opusc. mart. X) 1943.

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Cherostus fungivorus sp. n. Mauritius
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Cophodema gebieni sp. n. Brazil
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Miltoprepes Gerst. (= *Anephycetus* Fairm.) p. 179 (note), GRIDELLI Mém. Inst. franç. Afr. noire no. 10.

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Prunaspila n. n. for *Aspila* Fähr. nec Steph. p. 67, KOCH Entomologist 83.

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Steira see *Stips*.

Stips n. n. for *Steira* Westw. nec Esch. p. 66, KOCH Entomologist 83.

Strongylium insulare sp. n. Fernando Po p. 125 figs., GEBIEN Zool. Anz. 138 1942.—*S. fortestriatum* Congo, *librevilleum* Fr. Congo, *favereli*, *bicoloripes* Gabon spp. n.; *muata* var. n. *viridanum* Ivory Coast p. 14, PIC Echange 63 1947.—*S. oyemun*, *coeruleum* spp. n. Gabon; *episcopale* var. n. *paulopurpureum* Congo p. 3, PIC Echange 64 1948.

Tactoderus subopacus see *Praogenia gagatina*.

Tearchus xántusi Borneo, Sumatra p. 71, *javanicus* Java p. 72 spp. n., KASZAB Folia ent. hung. 8 1943.

Thriptera laperrinei Peyerh. a subsp. of *crinita* Klug p. 166, GRIDELLI Mém. Inst. franç. Afr. noire no. 10.

Tonkinius key to Asiatic spp.; *scutellaris* Fairm. (= *nitidus* PIC); *thibetanus* Tibet p. 72, *indochinensis* Indo-China p. 73 spp. n., KASZAB Folia ent. hung. 8 1943.

Toxicum formosanum sp. n. Formosa p. 37 fig., KULZER Ent. Arb., Münich 1.

Tribolium (Stene) *beccarii* sp. n. Fr. Sudan p. 177, GRIDELLI Mém. Inst. franç. Afr. noire no. 10.

Trichosphaena peyerimhoffi sp. n. Fr. Sudan p. 158 fig., GRIDELLI t.c.

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Vansonium gen. n. (Tentyriini) p. 354, *bushmanicum* sp. n. S. Africa p. 355 figs., KOCH Ann. Transv. Mus. 21.

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Alleculidae of Aïr, Fr. Sudan, PIC Mém. Inst. franç. Afr. noire no. 10 pp. 149-150.

Allecula mocquerysi p. 15, *metallicippennis* p. 16, spp. n. Gabon, PIC Echange Num. spéc. (Opusc. mart. VI) 1942.—*A. luteimembris* p. 12, *brevepubens* p. 13 Pahang, *laosensis* Siam, *perroti*, *bicoloricornis* Tonkin, *rufoposticalis* Malacca p. 12, *curvataipes*, *annulatipes* p. 13, *dauphini* Borneo, *rouyeri*, *soekaboemiana* p. 14, *vilipes* p. 15 Java, *palembanga* p. 14, *camariiformis*, *kannegieteri*, *modiglianii* p. 15 Sumatra, *kinabaluensis* Kinabalu p. 14 spp. n., PIC op. cit. XII 1944.—*A. malabarensis* Malabar, *breunungi* Indo-China spp. n. p. 10, PIC Echange 64 1948.

Bolbostetha atricolor Malacca p. 15, *angustiformis* Malaya p. 16 spp. n., PIC Echange Num. spéc. (Opusc. mart. XII) 1944.

Bratyna nigricollis sp. n. Gabon p. 13, PIC op. cit. V 1941.—*B. dilatipes* sp. n. Joko p. 9, PIC op. cit. XIII 1944.

Ectenostoma perroudi, *discicollis* spp. n. Dahomey p. 13, PIC op. cit. V 1941.—*E. annulipes* PIC (= *nigriceps* Borch.) ; *senegalensis* PIC reduced to var. of *a.* p. 928; *a. varr. n. villiersi*, *ruficollis*, *obscurior* Dakar p. 929, PIC Bull. Inst. franç. Afr. noire 12.

Excavatoprostenus subgen. n. (type *impressiceps* sp. n.) see *Prostenus*.

Heliotaurus haemorrhoidalis Fairm. an ab. of *nigripennis* F. p. 15, DE PEYERIMHOFF Bull. Soc. ent. Fr. 55.

Lystronychus (*Spinolystronychus* subgen. n.), (*S.*) *bisbinotatus* Fr. Guiana, *bicoloratus* Venezuela p. 5, (*L.*) *semiviridis* Paraguay, *viridescens*, *foveolatus* Brazil, *diversipes* Argentina p. 6 spp. n., PIC Echange Num. spéc. (Opusc. mart. XIII) 1944.

Macrocestela gen. n. p. 13, *striata* sp. n. Congo p. 14, PIC op. cit. V 1941.

Microprostenus hickeri sp. n. Brazil p. 9, PIC op. cit. XIII 1944.

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Pseudomorocaulus letestui sp. n. no locality p. 9, PIC Echange Num. spéc. (Opusc. mart. XIII) 1944.

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Synallecula microceps sp. n. Senegal p. 2, PIC Echange 64 1948.—*S. berlandi* sp. n. Mauritania p. 74, PIC Bull. Inst. franç. Afr. noire 12.—*S. bicoloriceps*, *ruficeps*, *basipennis*, *villiersi* spp. n.; *cherenensis* var. n. *chopardi* Fr. Sudan p. 150, PIC Mém. Inst. franç. Afr. noire no. 10.—*S. attenuata* Ivory Coast, *congoana* Congo, *diversicollis*, *breviceps* Gabon, *nigricornis* p. 14, *seminigra* (with var. n. *minuta*), *palliditarsis* (with var. n. *obscurior*) Cameroons, *triimpresa* Dahomey p. 15, spp. n., PIC Echange Num. spéc. (Opusc. mart. VI) 1942.

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Xystropus granulosus p. 3, *rufoaenescens*, *theresae*, *corumbanus* p. 4 Brazil, *borchmanni* Venezuela, *baeri* Peru, *superbus* Colombia p. 3, *lineatus* Argentina p. 4 spp. n., PIC t.c.

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Adosogria sparsepubens Koudou, *impressicollis* Benito spp. n. p. 2, PIC Echange Num. spéc. (Opusc. mart. I) 1940.

Allocera obscura sp. n. Gabon p. 13, PIC op. cit. VI 1942.

Borchmannia latior Java, *binotaticollis* Malacca spp. n. p. 10, PIC op. cit. X 1943.

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Entrapelodes scapularis sp. n. Belg. Congo p. 361, PIC Rev. Zool. Bot. afr. 43.

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Grandelagria subgen. n. (type *bicoloripes* sp. n.) see *Lagria*.

Heterogria forticornis sp. n. Camerons p. 14, Pic Echange Num. spéc. (Opusc. mart. V) 1941.

Lagria (*Grandelagria* subgen. n.) *bicoloripes* sp. n. Dahomey p. 3, Pic op. cit. I 1940.

Sora vittatipennis sp. n. Cameroons p. 928, Pic Bull. Inst. franç. Afr. noire 12.

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Xenogena grandis Eritrea, *longicornis* p. 11, *minor* p. 12 Congo, *auberti* Gabon, *alluaudi* Assinie, *leonea* p. 11, *semiobscura* Sierra Leone, *laticeps* Fort Sibut, *striatipennis*, *conradsi* Tanganyika p. 12 spp. n. Pic t.c.—*X. grandis* sp. n. Eritrea p. 10, Pic Echange 63 1947.—*X. laticollis* sp. n. Senegal p. 2, Pic Echange 64 1948.

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Brasilium obscurum sp. n. Brazil p. 11, Pic Echange Num. spéc. (Opusc. mart. XII) 1944.

Dircaea australis, 4-guttata characters p. 13 figs., PALM Opusc. ent. Lund 15.

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OEDEMERIDAE.

Generic names of Oedemeridae and their type species, complete to 31 Dec. 1948, ARNETT J. Wash. Acad. Sci. 40 pp. 217-225.

Asclera Dej. *sanguinicollis* F. designated type p. 219, ARNETT J. Wash. Acad. Sci. 40.

Ascleronia Seidl. *semiflava* Reitt. designated type p. 219, ARNETT t.c.

Ascleropsis Seidl. *maculicollis* Gangl. designated type p. 219, ARNETT t.c.

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—*E. drescheri* sp. n. Java p. 10, Pic Echange Num. spéc. (Opusc. mart. X) 1943.

Falsonerdanus Pic *nigronotatus* Pic designated type p. 221, ARNETT J. Wash. Acad. Sci. 40.

Falsosessinia Pic *spinosa* Pic designated type p. 221, ARNETT t.c.

Fissilonacerdes Pic *javanus* Pic designated type p. 221, ARNETT t.c.

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Matusinhosa Pic *maculata* Pic designated type p. 221, ARNETT J. Wash. Acad. Sci. 40.

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Mimoncomera longiceps sp. n. Java p. 10, Pic Echange Num. spéc. (Opusc. mart. X) 1943.

Morpholyicus Lea *apicalis* MacL. designated type p. 222, ARNETT J. Wash. Acad. Sci. 40.

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Oxacis Lec. *cana* Lec. designated type p. 223, ARNETT t.c.—*O. titschacki* sp. n. Peru p. 8, Pic Echange Num. spéc. (Opusc. mart. XII) 1944.

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Sisenes Champ. *suturalis* Champ. designated type p. 224, ARNETT J. Wash. Acad. Sci. 40.

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Stereopalpus minutus sp. n. China p. 12, Pic op. cit. VIII 1942.

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Anthicidae of Aïr, Fr. Sudan, Pic Mém. Inst. franç. Afr. noire no. 10 pp. 150–153.

Ambliderus villiersi sp. n. Fr. Sudan p. 151, Pic Mém. Inst. franç. Afr. noire no. 10.

Anthicomorphus olivaceus sp. n. Malacca p. 11, Pic Echange Num. spéc. (Opusc. mart. X) 1943.

Anthicus sellatus abb. n. *trimaculatus*, *suturalis* p. 22, *albicolor* p. 23 Bohemia, ROUBAL Acta Soc. ent. Čsl. 47.—*A. siccensis* sp. n. Tunisia p. 107 figs., NORMAND Rev. franç. Ent. 17.—*A. floralis* L. (=fallax Broun) p. 94, BUCK Ent. mon. Mag. 86.—*A. brevisignatus* Pic (=singularicornis Pic) p. 22; *grahami* p. 23, *zuluensis* p. 24 spp. n. S. Africa figs., VAN HILLE Proc. R. ent. Soc. Lond. (B) 19.—*A. magnini* subsp. n. *basithorax* Crete p. 3, Pic Echange Num. spéc. (Opusc. mart. II) 1941.—*A. longepilosus* China, (*Acanthinus*) *validiceps*, *nitidioriceps* p. 13, *diosensis* Peru, *charveini* Guiana p. 14 spp. n., Pic op. cit. VII 1942.—*A. flavidicolor*, *longisulcatus* spp. n. S. India p. 4, Pic op. cit. IX 1943.—*A. flavidicolor* sp. n. Malacca p. 11, Pic op. cit. X 1943.—*A. (Ischyropalpus) titschacki* sp. n. Peru p. 9, Pic op. cit. XIII 1944.—*A. (Aulacoderus) okandjandensis* sp. n. S. Africa p. 10, Pic op. cit. XIII 1944.—*A. (Cordicomus) subcrassipes*, (*Stricticomus*) *chopardi* spp. n. Fr. Sudan p. 152, Pic Mém. Inst. franç. Afr. noire no. 10.—*A. (Liparoderus) panousei* sp. n. Soulamine p. 2, Pic Echange 64 1948.

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Formicomus caeruleus ♂ ♀ characters p. 68; *simpliciruralis* S. Africa p. 69, *spatulatus* Kenya p. 71 spp. n. figs., VAN HILLE J. ent. Soc. sthn Afr. 13.—*F. luteomaculatus*, *boviei* spp. n. Congo p. 15, PIC Echange 63 1947.—*F. niveospilosus* var. n. *airensis* Fr. Sudan p. 151, PIC Mém. Inst. franç. Afr. noire no. 10.

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Mecynotarsus trinotatus sp. n. S. India; *tenuipes* var. n. *obscurius*, *pallidior* Japan p. 4, PIC op. cit. IX 1943.—*M. laticornis* sp. n. S. India p. 9, PIC op. cit. XII 1944.—*M. semicinctus* var. n. *basalis* Fr. Sudan p. 151, PIC Mém. Inst. franç. Afr. noire no. 10.

Notoxus unifasciatus sp. n. Arabia p. 15, PIC Echange 63 1947.—*N. vianay* sp. n. Argentina p. 3, PIC Echange Num. spéc. (Opusc. mart. I) 1940.

Pseudoleptaleus minimus, *brunneofasciatus*, *humeralis* spp. n. S. India p. 5, PIC op. cit. IX 1943.

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catus Guadeloupe p. 6 spp. n., PIC op. cit. IX 1943.—*H. latecephalus*, *bidenudatus* Malacca spp. n. p. 11, PIC op. cit. X 1943.—*H. omissus* Germany, *lacroixi*, *stanleyi*, *longicornis* p. 7, *clermonti* p. 10 Congo, *ptinomorphus* Mauritius, *curtesignatus* Casamance p. 8 spp. n.; *graciliornis* n. n. for *gracilicornis* PIC 1927 nec 1914 p. 7; *crassicornis* n. n. for *dilaticornis* PIC 1929 nec 1898; *latecephalus* n. n. for *macrocephalus* PIC nec Chp.; *pubescens* var. n. *fuscofemoratus* Tonkin p. 8, PIC Echange 64 1948.—*H. (?Aderus)* *atromarginatus* sp. n. Congo p. 11, PIC Echange 65 1949.

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Revision of Spanish Mylabrini, ALFARO Bol. Pat. veg. Ent. agric. 17 pp. 61–82, 75 figs.

Meloidae of Aïr, Fr. Sudan, PIC Mém. Inst. franç. Afr. noire no. 10 pp. 146–147, 1 fig.

Meloidae of N. Centr. Mexico collected on the David Rockefeller Expedition, 1947 (key to genn. p. 5), VAURIE Amer. Mus. Novit. no. 1477, 68 pp. 21 figs.

Actenodia 4-notata Sudan, *6-punctata* spp. n.; *curtula* var. n. *rufobasalis*, *biinterrupta* p. 7; *chrysomelina* var. n. *juncta* p. 8 S. Africa, PIC Echange Num. spéc. (Opusc. mart. II) 1941.

Ceroctis postrimaculata, *lateapicalis*, *nitida* Congo, *tangana* Tanga, *trifasciata* p. 8, *curtipennis* S. Africa, *diverseesignata* E. Africa p. 9 spp. n., PIC t.c.—*C. congoana* var. n. *communis*, *paulodivisa*, *sinuatecincta* Congo; *angustata* sp. n. (with var. n. *biconnexa* S. Africa, *immaculata* Congo) p. 4; *4-fasciata* var. n. *postreducta*; *gyllenhali* var. n. *braunsi*, *mediobifasciata* S. Africa; *bunkeyana* var. n. *subjuncta* Congo p. 5, PIC op. cit VI 1942.

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op. cit. III 1941.—*C. billbergi* var. n. *parcepunctata* Spain p. 81 figs., ALCALDE Bol. Pat. veg. Ent. agric. 17.—*C. particularenotata* sp. n. Grand-Atlas; *distincta* var. n. *sexnotata*, *theresae* Algeria p. 10, PIC Echange 65 1949.—*C. argentata* var. n. *villiersi* Fr. Sudan p. 146, PIC Mém. Inst. franç. Afr. noire no. 10.

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Decatoma alluaudi sp. n. Sudan p. 7, PIC Echange Num. spéc. (Opusc. mart. II) 1941.—*D. undata* var. n. *fenestrata*; *histrio* var. n. *interrupta*, *multiinterrupta* p. 3; *caffra* var. n. *latenotata* p. 4 S. Africa; *postbimaculata* Sierra Leone p. 3, *latefasciata* Belg. Congo p. 4 spp. n., PIC op. cit. VI 1942.

Epicauta moniliformis sp. n. Arizona p. 103, DILLON Ent. News 61.

Gorrizia subgen. n. see *Mylabris*.

Lydus (Alosimus) robustus var. n. *theryi*, *lateaurata*; (*A.*) *tenuicornis* var. n. *kocheri* Morocco p. 9, PIC Echange 65 1949.

Mylabris keys to subgenn. p. 63, to spp. p. 64; (*Croscherichia* p. 63, *Gorrizia* p. 64 subgenn. n.), ALFARO Bol. Pat. veg. Ent. agric. 17.

Nemognatha angustata sp. n. S. India p. 5, PIC Echange Num. spéc. (Opusc. mart. II) 1941.

Pleuropasta reticulata, *mirabilis* distinguishing characters p. 57 figs., VAURIE Amer. Mus. Novit. no. 1477.

Zonabris afzelii var. n. *latebasalis* Upper Senegal & Niger p. 74, PIC Bull. Inst. franç. Afr. noire 12.—*Z. klugi* var. n. *graffi* Persia p. 10, PIC Echange 63 1947.—*Z. laurenti* sp. n. Senegal p. 14, PIC Echange 64 1948.—*Z. subarcuatefasciata*, *opacipennis* S. Africa, *letestui* Ubangi, *discotrisignata* p. 5, *diversipes* p. 6 Belg. Congo, *particularefasciata* Tanganyika p. 5, *externenotata* Guinea spp. n.; *vestita* var. n. *mediojuncta*, *subjuncta*, *internejuncta* Dahomey; *si-butensis* subsp. n. *yalanganus* Ubangi, var. n. *antedivisa*, *externedivisa*, *bidivisa*, *tridivisa* p. 6, *postdivisa* p. 7

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Zonitoschema nigroapicalis sp. n. Sierre Leone; *dollei* var. n. *atropapicalis* Tonkin; *seminigra* var. n. *subfasciata* Congo p. 6, PIC Echange 65 1949.

MORDELLIDAE.

Revision of World genn. of Mordellidae described up to 1939 (key p. 38), ERMISCH Ent. Bl. 45-46 pp. 34-92.

Some Mordellidae from Japan and adjacent regions, NAKANE & NOMURA Trans. Kansai ent. Soc. 15 pp. 1-17, 9 figs.

Mordellidae of Air, Fr. Sudan, PIC Mém. Inst. franç. Afr. noire no. 10 pp. 148-149.

Anaspis testaceicornis var. n. *bicoloriventris* Fr. Sudan p. 149, PIC Mém. Inst. franç. Afr. noire no. 10.

Austromordella gen. n., *tarsata* sp. n. Australia p. 63, ERMISCH Ent. Bl. 45-46.

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Portuguese Lamellicorns in Mus. Zool. Univ. Coimbra, LADEIRO Mem. Estud. Zool. Univ. Coimbra no. 196, 27 pp.

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Pachnoda aemula subsp. n. *ruteri* Fr. Sudan p. 229 fig., VILLIERS Mém. Inst. franç. Afr. noire no. 10.—*P. nachtigali* var. *vespertilionum* larva p. 67 fig., PAULIAN & DELAMARE-DEBOUTTEVILLE Publ. Mus. Hist. nat., Paris no. 10 1948.

Pilinurgus katanganus sp. n. Belg. Congo p. 171, BASILEWSKY Rev. Zool. Bot. afr. 43.

Placodidus collarti Burg. valid sp. not. synonym of *Astoxenus dilaticollis* Mos. p. 169, BASILEWSKY t.c.

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Taurhina longiceps subsp. n. *iturica*, *elgonica* Belg. Congo p. 34, BASILEWSKY Lambillionea 50.

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Eggs and larvae of *Adelognatha*, VAN EMDEN Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 365-372, 15 figs.

Curculionids of France, pt. 1, HOFFMANN Fn. de France 52 486 pp. 225 figs.

New South American Baridinae, HUSTACHE Bol. Mus. nac. R. de J. (Zool.) 1949 no. 95, 55 pp.; no. 97, 143 pp.

Key to Leptopini of Chile, KUSCHEL Acta zool. illoana 8 1949 p. 18.

Curculionids of Aïr, Fr. Sudan, MARSHALL Mém. Inst. franç. Afr. noire no. 10 pp. 207-211.

S. American Cryptorrhynchinae described by C. Fiedler, PAPF Ark. Zool. (2) 1 no. 11 pp. 147-172.

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Notes on some Polish Curculionids, SMRECZYŃSKI Polsk. Pismo ent. 19 pp. 149-173.

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Aegorhinus nodipennis Hope (= *subrugosus* Phil.); *eschscholtzi* Boh. (= *reticulatus* Gyll.); *fasciatus* Boh., *vermicularis* Desbr. reduced to varr. of *superciliatus* Guér.; *fasciatus* (= var. *perplexus* Desbr.) p. 16, KUSCHEL Agric. tecn., Chile 10.—*A. strumosus*, *vitulus* see *Alastoropolus*.

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Altconomus Desbr. (= *Mylacorrhina* Reitt.) included spp. p. 33, SOLARI Mem. Soc. ent. ital. 29.

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Asithobaroides gen. n. (Baridinae), *puncticollis* [sic? *puncticollis*] sp. n. Fr. Guiana p. 100, HUSTACHE t.c.

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Broun, *C. erubescens* Broun) p. 195 figs.; GOURLAY Trans. Proc. roy. Soc. N.Z. 78.

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Baris ochsi sp. n. France; *intermedia* Hust. a form of *cuprirostris* F. p. 197, HOFFMANN Rev. franç. Ent. 17.—*B. tenuis, flavipes* see *Chilebaris*.

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Canephorulana see *Amitrus*; *rufipes* see *A. alutaceus*.

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Ceuthorrhynchus magnini ♂ p. 171, SMRECYŃSKI Polsk. Pismo ent. 19.—*C. vittatipennis* sp. n. Cyprus (with var. n. *peyroni* Tarsus); *geographicus* var. n. *grisescens* Egypt p. 2, Pic Echange Num. spéc. (Opusc. mart. I) 1940.—*C. sellatus* see *Sibinia*.

Chalcodermus speculifer Heller (= *lunatus* Bond.) p. 18, KUSCHEL Agric. tecn., Chile 10.—*C. sulcatus* sp. n. Brazil p. 6, FIEDLER Zool. Anz. 144 1943.

Chilebaris gen. n. for *Baris tenuis* Blanch. (type), *B. flavipes* Phil. p. 19, KUSCHEL Agric. tecn., Chile 10.

Chileudius gen. n. for *Eudius varians* Blanch. p. 12, KUSCHEL t.c.

Chlorophanus graminicola var. n. *gandoni* France p. 426, HOFFMANN Fn. de France 52.

Cholus dealbatus Boh. (= *ornatus* Chevr.) p. 17, KUSCHEL Agric. tecn., Chile 10.—*C. atropunctellus* see *Acrotomopus*; *trizonatus* see *Dionychus trifasciatus*.

Cimbodes gen. n. for *Cimbis umbratus* Fst. (type), *venustus* Hartm., *squamulosus* Hust. p. 727; u. var. *sculptus* Fst. (= *striatus* Hust.) p. 728; *brevipes* Tanganyika, *rotundicollis* Kenya p. 729, *katangensis* Belg. Congo p. 731 spp. n. figs., MARSHALL Ann. Mag. nat. Hist. (12) 3.

Cimbis umbratus, *venustus*, *squamulosus* see *Cimbodes*.

Cleonogonus gen. n. (Cleoninae) p. 53, *bucki* sp. n. Libya p. 54 figs., SOLARI Boll. Soc. ent. ital. 80.

Cnemargopsis subgen. n. (type *aquilinus* Boh.) see *Macromerus*.

Cnemargus *griseus* Brazil p. 16, *tuberculatus* Colombia p. 17 spp. n., FIEDLER Zool. Anz. 144 1943.

Cnemocoelus brevis see *Porteriella*.

Cneorrhinus (*C.*) *barcelonicus* subsp. n. *rungsi* Morocco p. 88 figs., HOFFMANN Bull. Soc. ent. France 55.

Coeloides key to British spp. p. 88, ALLEN Ent. mon. Mag. 86.—*C. ganglionus* see *Hypocoeliodes*.

Coelonertodes gen. n. (Baridinae), *tessellatus* sp. n. Brazil p. 1, HUSTACHE Bol. Mus. nac. Rio de J. (Zool.) no. 97 1949.

Coelonertus bruchi (also Uruguay) p. 47, *trifasciatus* p. 48, (*Crinacia*) *elegantulus* p. 49 Argentina, *humilis* p. 48, (*C.*) *alboscutellatus*, (*C.*) *seriatus* p. 49 Brazil spp. n., HUSTACHE op. cit. no. 95 1949.

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Coniocleonus sejunctus Faust from *Stephanocleonus* p. 39, SOLARI Mem. Soc. ent. ital. 29.

Conocloeus see *Conothorax*.

Conothorax Jek. (= *Conocloeus* Mshl.) *luctuosus* Lac. (= *variabilis* Kessel) p. 12, KUSCHEL Agric. tecn., Chile 10.

Conotrachelus subnebulosus Hust. (= *irroratus* Fiedl.); *cervinus* Hust. (= *pullus* Fiedl.); *glaber* Hust. (= *aequalis* Fiedl.); *striatus* Hust. (= *kirschi* Blackw.) p. 18, KUSCHEL t.c.

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Cossonus nigropiceus see *Pentarthrum castaneum*; *canus* see *Stenommatus*.

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Cyclobarus ornatus sp. n. Morocco p. 84 figs., HOFFMANN Bull. Soc. ent. France 55.

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Cydianerus latruncularius Perty (= *chevrolati* Blanch.) p. 12, KUSCHEL Agric. tecn., Chile 10.

Cylindrocerus parvulus Fr. Guiana, *columbianus* (also Ecuador) p. 34, *claveri* p. 35, *rubromaculatus* Colombia, *brevis* Brazil, Argentina, Paraguay p. 36, *urbanus*, *fallaciosus* p. 37, *boliviensis* p. 39 Bolivia, *dispersus* Ecuador, *trimaculatus* Brazil p. 38, (?) *peruvianus* Peru p. 39 spp. n., HUSTACHE Bol. Mus. nac. Rio de J. (Zool.) no. 97 1949.

Cylindrorrhinus angulatus Guér. (= *Adioristus rubripes* Phil., *A. rugatus* Phil. (= *C. angulatus* var. *scrobiculatus* Burm.)) p. 12; *griseus* Phil. (= *A. apiculatus* Hust.) from *A.*; *denticulatus* Fairm. & Ger. (= *inquinatus* Lac.); *sulcatus* Fairm. (= *A. fuegianus* Berg); *lactifer* Burm. (= *quadrilineatus* Bovie) p. 13, Kus-

CHEL Agric. tecn., Chile 10.—*C. costatus*, *sordidus* see *Paulsenius*.

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Cyrionyx alboscutellatus p. 22, *nitudulus* p. 23, (*Anones*) *fulvomaculatus* p. 24, (*A.*) *episternalis* p. 25 Brazil, *rufipes* Fr. Guiana p. 23, *cinereus* p. 24, *bruchi* (also Argentina) p. 25 Bolivia spp. n., HUSTACHE Bol. Mus. nac. Rio de J. (Zool.) no. 95 1949.

Dealia episternalis Bolivia p. 108, *glabrata* Fr. Guiana p. 109 spp. n., HUSTACHE op. cit. no. 97 1949.

Demoda kuscheli Bond. a valid sp.; *vittata* Casey (= *lineata* Bond.) p. 19, KUSCHEL Agric. tecn., Chile 10.

Derekolomus ater p. 262, *zonatus* p. 263 spp. n. Belg. Congo, MARSHALL Rev. Zool. Bot. afr. 43.

Dereodus cibrosus Fairm., *mesopotamicus* Pic, *pullus* Klb., *sebituane* Ancey, *sitonoides* Pic from *Neocimbus* p. 727, MARSHALL Ann. Mag. nat. Hist. (12) 3.

Desiantha praemorsa see *Listroderes delaiguei*; *novica* see *Listroderes costirostris obliqua*.

Diaeocoderus sparsutus sp. n. Tanganyika p. 736, MARSHALL Ann. Mag. nat. Hist. (12) 3.

Dialomia contracta, *intermedia* p. 124, *brevirostris* p. 125, *bactriae* p. 126 Brazil, *subsetosa* Fr. Guiana p. 125 spp. n., HUSTACHE Bol. Mus. nac. Rio de J. (Zool.) no. 97 1949.

Diastethus intermedius p. 82, *viridulus* p. 83, *niger*, *nitidus* p. 84, *squamiventris*, *brasiliensis* p. 85 Brazil, *aeneus* Ecuador p. 83 spp. n., HUSTACHE t.c.

Dimesus bicolor p. 40, *rubrotibialis*, *conicollis* p. 41 Brazil, *benoisti* Ecuador p. 40, *paranensis* Paraguay, Argentina p. 42 spp. n., HUSTACHE t.c.

Dinomorphus marshalli sp. n. Brazil p. 449 figs., BONDAR Rev. Ent., Rio de J. 21.

Dionychus trifasciatus Hust. (= *Cholus trizonatus* Günth.) p. 17, KUSCHEL Agric. tecn., Chile 10.

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Diorymeropsis dispersesquamulatus Brazil p. 139, *humilis* Argentina, Paraguay p. 140 spp. n., HUSTACHE op. cit. no. 97 1949.

Diorymerus boliviensis Bolivia, *magnificus*, *batesi* p. 34, *splendidus* p. 35 Brazil spp. n., HUSTACHE op. cit. no. 95 1949.—*D. beckeri* p. 460, *semirufus* p. 461, *partitus* p. 462 spp. n. Brazil figs., BONDAR Rev. Ent., Rio de J. 21.

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Diplogrammus maculipes Chevr. reduced to form of *quadrivittatus* Ol.; *nitidulus* Fiedl. reduced to form of *amoenus* Rosensch. p. 18, KUSCHEL Agric. tecn., Chile 10.

Dissopygus metallescens Boh. (= *oblongus* Casey) p. 19, KUSCHEL t.c.

Dorytomodes see *Peristoreus*; *draphyllae* see *P. innocens*.

Echinocnemus key to W. African spp.; *congoanus* Hust. (= *abyssinicus* Hust.); *obscurus* Hust. (= *vicinus* Hust.) p. 767; *gemellus* p. 768, *rostralis* p. 769, *fasciatus* p. 770, *femoralis* p. 771, *marmoreus* p. 772, *recticollis* p. 773, *limbicollis* p. 774 spp. n. Senegal, MARSHALL Ann. Mag. nat. Hist. (12) 3.

Entimus granulatus L. (= *speciosus* Er.) p. 12, KUSCHEL Agric. tecn., Chile 10.

Epipedosoma zanquebaricum R. B. *nguruense* Tanganyika p. 732; *subquadratum* Kenya p. 733, *oblongum* Tanganyika p. 734 spp. n.; *laticolle* Klb. (= *tuberculatum* Hust.); key to spp. p. 735, MARSHALL Ann. Mag. nat. Hist. (12) 3.

Erycosomus vergarae Reed (= *bruchi* Hust.) from *Centrinus* p. 18, KUSCHEL Agric. tecn., Chile 10.

Ethelda cinerea sp. n. Ecuador p. 43, HUSTACHE Bol. Mus. nac. Rio de J. (Zool.) no. 97 1949.

Eubulus miniatus Boh. (= *bruchi* Hust.) from *Cryptorhynchus* p. 18, KUSCHEL Agric. tecn., Chile 10.

Eucalus Lac. (= *Gayella* Hust.) p. 19, KUSCHEL t.c.

Eucrostus gen. n. (Baridinae) p. 109, *ferrugineus* sp. n. Bolivia p. 110, HUSTACHE Bol. Mus. nac. Rio de J. (Zool.) no. 97 1949.

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Euplatinus syriacus Pic synonymy discussed p. 33, SOLARI Mem. Soc. ent. ital. 29.

Eurhinopsella see *Eurhinopsellix*.

Eurhinopsellix (as *Eurhinopsella* under the sp.) gen. n. (Baridinae), *triangularis* sp. n. Bolivia, Ecuador p. 53, HUSTACHE Bol. Mus. nac. Rio de J. (Zool.) no. 95 1949.

Eurhinus purpureus Brazil, Paraguay p. 51, *lobicornis* Brazil, *ascensionensis* Paraguay, Argentina p. 52 spp. n., HUSTACHE t.c.

Falklandiellus gen. n. for *Falklandius suffodens* End. (type), *F. inaequalis* Champ. p. 14, KUSCHEL Agric. tecn., Chile 10.

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Farnia rubra sp. n. Brazil p. 93, HUSTACHE Bol. Mus. nac. Rio de J. (Zool.) no. 97 1949.

Fleurops conorrhinus Mshl. from *Euonychus* p. 260; *kivuanus* sp. n. Belg. Congo p. 261, MARSHALL Rev. Zool. Bot. Afr. 43.

Garnia stegotopsisides sp. n. Argentina p. 93, HUSTACHE Bol. Mus. nac. Rio de J. (Zool.) no. 97 1949.

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Genalia gen. n. (Baridinae), *rugosa* sp. n. Brazil p. 119, HUSTACHE Bol. Mus. nac. Rio de J. (Zool.) no. 97 1949.

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Graphognathus minor Buch. (= *Naupactus breviscapus* Hust.) p. 10, KUSCHEL Agric. tecn., Chile **10**.

Graphonotus decarinatus p. 2, *detuberculatus* p. 5 Brazil, *carinifrons* Venezuela, Brazil p. 3, *semicarinatus* Fr. Guiana p. 4 spp. n., FIEDLER Zool. Anz. **144** 1943.

Gymnetron review of subgen. *Apri-* *nus* p. 277, catalogue of spp. p. 280; (*Aprinodactylus* subgen. n. p. 278); (*A.*) *concavirostre* sp. n. Irak p. 279; *ludyi* further description p. 281 figs., STÖCKLEIN Ent. Arb., Münich **1**.

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Heterexis laeviusculus Broun (= *sculptipennis* Broun) p. 195 figs., GOURLAY Trans. Proc. roy. Soc. N.Z. **78**.

Heterophytobius (*Neophytobius*) *denti-* *collis* Gyll. a valid sp. not syn. of *quadrinodosus* G. p. 49, SOLARI Mem. Soc. ent. ital. **29**.

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(*M.*) *foveifrons* p. 38 Bolivia, *semi-* *rufus* p. 37, (*M.*) *distortus* p. 39, (*H.*) *rubripes* p. 41 Argentina, Paraguay, (*M.*) *continuatus* Fr. Guiana p. 39 spp. n., HUSTACHE Bol. Mus. nac. Rio de J. (Zool.) no. 95 1949.

Hipporrhinus harrisi sp. n. Tanganyika p. 741, MARSHALL Ann. Mag. nat. Hist. (12) **3**.

Homalostylus aduncus Er. (= *geni-* *culatus* Hust.) from *Sphenophorus*; *tornowi* Brèth. from *Rhodobaenus* p. 20, KUSCHEL Agric. tecn., Chile **10**.

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Hypera lucasi Cap. (= *dubitabilis* Hust.) p. 49, SOLARI Mem. Soc. ent. ital. **29**.

Hyperodes ornatipennis Blanch., *lineaticollis* Blanch., *minutus* Blanch. from *Phytonomus* p. 14, KUSCHEL Agric. tecn., Chile **10**.

Hypocoeliodes ganglionus Boh. from *Coeliodes* p. 19, KUSCHEL t.c.

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Isanates aculeatus sp. n. Uganda p. 737 fig., MARSHALL Ann. Mag. nat. Hist. (12) **3**.

Jops iotomioidea p. 60, *latitarsis* p. 62, *cribricollis* p. 63 Argentina, *rufitarsis* Brazil p. 62, *micronyx* Paraguay p. 61 spp. n., HUSTACHE Bol. Mus. nac. Rio de J. (Zool.) no. 97 1949.

Jopsidaspis oblongula sp. n. Argentina, Paraguay p. 60, HUSTACHE t.c.

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Leptolepyrus meridionalis var. n. *bonnairei* France p. 379, HOFFMANN Fn. de France 52.

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Leptosphaerotus setulosus Desbr. (= *conicirostris* Hust.) p. 32, SOLARI Mem. Soc. ent. ital. 29.

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Liobaridia anomala p. 469, *malleri* p. 471 Brazil, *hustachei* Argentina p. 470 spp. n., BONDAR Rev. Ent., Rio de J. 21.

Lipsanus iniquus S. Rhodesia p. 725, *adjunctus* N.W. Transvaal p. 726 spp. n., MARSHALL Ann. Mag. nat. Hist. (12) 3.

Lispodemus key to spp., *plaumanni* sp. n. Brazil p. 475, BONDAR Rev. Ent., Rio de J. 21.

Lissobaris denticollis Peru, *castaneipennis* Bolivia, Colombia, *armicollis* Bolivia, Peru p. 102 spp. n., HUSTACHE Bol. Mus. nac. Rio de J. (Zool.) no. 97 1949.

Listroderes apicalis Waterh. (= *argentinensis* Hust.); *rugipennis* Blanch. (= *antarctica* Ger., *katerensis* Champ.); *vulsa* End. (= *gibbera* End.); *falklandica* End. (= *bracteata* End.); *cineraria* Blanch. (= *liliputana* Ger.); *tuberculifera* Blanch. (= *binodosa* Ger.); *delaiguei* Ger. (= *Desiantha praemorsa* Lea); *obliqua* Klug, *angusticeps* Blanch. varr. of *costirostris* Schönh.; c. *obliqua* (= *difficilis* Germ., *hypocrita* Hust., *Desiantha novica* French); *bimaculata* Boh. (= *lugubris* Germ., *costirostris angusticeps* Blanch., *stictica* Germ.) p. 13; *succincta* Boh. (= *vulgaris* Germ.); *ovata* Boh. (= *chalcea* Blanch., *nodifera* Boh., *tristis* Ger.); *Antarctobius* a subgen.; *Trachodema* a subgen. & transferred from *Rhytidininae* p. 14, KUSCHEL Agric. tecn.,

Chile 10.—*L. punicola* sp. n. Peru p. 42 figs., KUSCHEL Acta zool. lilloana 8 1949.—*L. subcostata*, *carinocollis* (with var. *caudiculata*), *percostata*, *cupreosquamosa*, *thermarum*, *schythae* see *Paulsenius*; *compressiventris*, *nordenskiöldi* (*divaricata*) see *Malvinius*.

Lixellus see *Anchodemus*.

Lixodes Pasc. transferred from *Erihirininae* to *Cholinae* p. 15, KUSCHEL Agric. tecn., Chile 10.—*L. obtusus* see *Acrotomopus*.

Lixus spartii var. n. *schaeferi* Corsica p. 194, HOFFMANN Rev. franç. Ent. 17.—*L. speciosus* Miller (= *giganteus* Leoni not ab. of *algirus* L.) p. 38, SOLARI Mem. Soc. ent. ital. 29.

Lydamis key to spp.; *funebris*, *nitida* p. 27, *bifasciata* p. 28, *obscura* (with var. n. *unicolor*), *subaurata* p. 29 Brazil, *vicina*, *venezuelana* Venezuela, *pumila* Trinidad p. 28, *conicollis* Fr. Guiana p. 29 spp. n., HUSTACHE Bol. Mus. nac. Rio de J. (Zool.) no. 95 1949.

Macromerus (*Cnemargopsis* subgen. n. p. 7, key to spp. p. 8); *crassus* Fr. Guiana p. 9, *granulicollis* Colombia p. 10, *foveifrons* Brazil p. 14 spp. n.; *amazonus* p. 11, *angustatus*, *boliviensis* p. 13 further descriptions; *arachnooides* Fr. Guiana p. 18, *longitarsis* Brazil p. 19 spp. n., FIEDLER Zool. Anz. 144 1943.

Macrostylus puberulus Boh. from *Cycloderes* & in subgen. *Amphideritus* p. 13; (A.) *chilensis* sp. n. Chile p. 14 figs., KUSCHEL Acta zool. lilloana 8 1949.

Madarellus Casey (= *Willinkia* Bond.) p. 19, KUSCHEL Agric. tecn., Chile 10.

Madarus biplagiatus Boh. (= *reductus* Casey); *latus* Casey a valid sp. p. 19, KUSCHEL t.c.

Magdalisch interstitialis Desbr. (= *altaicensis* Reitt.) p. 48, SOLARI Mem. Soc. ent. ital. 29.

Malonotus see *Strangaliodes*.

Malvinius gen. n. for *Listroderes compressiventris* End. (type), *L. nordenskiöldi* End. (= *divaricata* End.) transferred from *Cylindrorrhiniinae* to *Leptopinae* p. 11, KUSCHEL Agric. tecn., Chile 10.

Matrilia longirostris sp. n. Brazil p. 44, HUSTACHE Bol. Mus. nac. Rio de J. (Zool.) no. 95 1949.

Medisus gen. n. (Baridinae) p. 32, *lineatulus* sp. n. Brazil p. 33, HUSTACHE op. cit. no. 97 1949.

Megavallius bilineatus p. 104, *nitidus*, *quadrisignatus* (also Paraguay) p. 105, *sexmaculatus*, *elegantulus* p. 106, *bispilotus* Brazil, *triangularis* Fr. Guiana p. 107, *benoisti* Ecuador p. 108 spp. n., HUSTACHE t.c.

Meneclonus basigranatus status discussed p. 40, SOLARI Mem. Soc. ent. ital. 29.

Metoposoma ficus sp. n. Brazil p. 456 figs., BONDAR Rev. Ent., Rio de J. 21.

Miaromimus schatzmayri reduced to var. of *medius* Desbr. p. 51, SOLARI Mem. Soc. ent. ital. 29.

Miccotrogus suturatus Perris (= *losiae* Desbr.) p. 46; *biskrensis* Faust (= *suturatus* Desbr.); *doderoi* sp. n. Sicily p. 47, SOLARI t.c.—*M. lineaticollis* sp. n. Lebanon p. 1, PIC Echange Num. spéc. (Opusc. mart. I) 1940.

Microbaridia pupillata sp. n. Brazil p. 32, HUSTACHE Bol. Mus. nac. Rio de J. (Zool.) no. 97 1949.

Micromagdalais gen. n. (Magdalinæ), *antennata* sp. n. p. 186 (with var. n. *longirostris* p. 188) Chile figs., KUSCHEL Arthropoda, Buenos Aires 1.

Micropalocus boliviensis Bolivia p. 101, *semi-lucidus* Brazil p. 103 spp. n., HUSTACHE Bol. Mus. nac. Rio de J. (Zool.) no. 97 1949.

Microrevena gen. n. (Baridinae) *ovata* sp. n. Brazil p. 118, HUSTACHE t.c.

Microrhinus Chevr. (= *Brachybaris* Faust.) transferred from Pterocolinae to Baridinae p. 17, KUSCHEL Agric. tecn., Chile 10.

Microstegotes minutus sp. n. Brazil p. 87, HUSTACHE Bol. Mus. nac. Rio de J. (Zool.) no. 97 1949.

Microzalestes longirostris Brazil p. 119, *longicornis* Paraguay p. 121 spp. n., HUSTACHE t.c.

Minurophilus violaceipennis Fairm. & Ger. from *Rhynchites* p. 16, KUSCHEL Agric. tecn., Chile 10.

Mionarthrus gen. n. for *Platyomus cinerascens* Blanch. p. 11, KUSCHEL t.c.

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Mylacorrhina see *Altonomus*.

Naupactus breviscapus see *Graphognathus minor*.

Nematocerus labwori sp. n. Kenya p. 740, MARSHALL Ann. Mag. nat. Hist. (12) 3.

Neocimbus pilipes a nom. nud.; *ornatissimus* Gerst. from *Polyclaeis* p. 727, MARSHALL t.c.—*N. cribrosus*, *mesopotamicus*, *nullus*, *sebituane*, *sitonoides* see *Dereodus*; *viridanus* see *Anomoederus*.

Neomagdalais cana sp. n. Chile p. 189 figs., KUSCHEL Arthropoda, Buenos Aires 1.

Neoscambus niveus sp. n. Peru p. 30, HUSTACHE Bol. Mus. nac. Rio de J. (Zool.) no. 95 1949.

Neospherigodes incomptus sp. n. Kenya p. 731, MARSHALL Ann. Mag. nat. Hist. (12) 3.

Nicentrus fasciatus p. 51, *columbianus* p. 52 Colombia, *longithorax* p. 51, *suturalis* p. 52, *dentirostris*, *corumbanus* p. 54, *antennalis* p. 55 Brazil, *circumcinctus*, *episternalis* p. 53, *robustus* p. 55, *viduatus* p. 56 Argentina, *semialbus*, *napoanus* p. 57 Ecuador spp. n.; *biplagiatus* var. n. *brasiliensis* Brazil p. 56, HUSTACHE Bol. Mus. nac. Rio de J. (Zool.) no. 97 1949.

Niphades rufipennis sp. n. Belg. Congo p. 262, MARSHALL Rev. Zool. Bot. afr. 43.

Omoides variabilis Phil. from *Anthonomus* p. 17, KUSCHEL Agric. tecn., Chile 10.

Oreoscotus salti sp. n. Tanganyika p. 76; key to E. African spp. p. 77, MARSHALL Ent. mon. Mag. 86.

Oreosecus gen. n. (Otiorrhynchinae), *porculus* sp. n. Tanganyika p. 75, MARSHALL t.c.

Oryssus spinicollis sp. n. Brazil p. 65, HUSTACHE Bol. Mus. nac. Rio de J. (Zool.) no. 97 1949.

Otiorrhynchus (*O.*) *pyrenaeus* var. n. *hustachei* p. 58; (*O.*) *auropunctatus* var. n. *sicardi* p. 63; (*O.*) *stomachosus* var. n. *similis* p. 74; (*O.*) *putoni* var. n. *dissimilis* p. 75; (*O.*) *chobauti* var. n. *falcozi* p. 76; (*O.*) *vitellus* var. n. *subligneus* p. 101; (*Arammichnus*) *ligustici* var. n. *macrosculptus* p. 142 France figs., HOFFMANN Fn. de France 52.—*O. caudatus* Rossi (= *abdomaculus* Gortani); c. var. *transpadanus* G. (= *caudatus* Stierl. & Reitt.) p. 29; *mesnili* Hoffm. (= *frigetus* S. nec Muls.); (*Dorymerus*) *dseudopicipes* n. n. for *ariasi* Mars. (nec S.) preocc.; (*D.*) *pseudocoriarius* n. n. for *elongatus* S. preocc. p. 30; *deleticollis* R. reduced to ab. of *calabrus* S.; *indefinitus* R. (= *matutinus* R.); *setosulus* S. (= *umbilicatoides* R.); (*Tournieria*) *omonimus* n. n. for (*T.*) *caroli* S. 1904 nec 1903 p. 31; *oertzeni* S. reduced to var. of *laconicus* Kirsch p. 32, SOLARI Mem. Soc. ent. ital. 29.—*O. (Cerdelegus) kocheri* sp. n. p. 83; (*Edelengus*) *atlasicus* subsp. n. *versatilis* p. 84 Morocco figs., HOFFMANN Bull. Soc. ent. Fr. 55.—*O. antarcticus* see *Falklandius*.

Ovanius niger Hust. raised to sp. (not var. of *picipennis* Boh.) p. 19, KUSCHEL Agric. tecn., Chile 10.—*O. asperulus*, *alutaceus* p. 94, *melanarius*, *punctulatus*, *minutus* p. 95, *gracilicornis*, *rufipes* p. 96, *rubricus* (also Argentina) p. 97, *laevicollis*, *scutellatus* p. 98, *ampeloglypterooides* p. 99 Brazil, *brevipennis* Argentine, *nitidus* Bolivia p. 97, *laevipennis*, *singularis* p. 99 Fr. Guiana spp. n., HUSTACHE Bol. Mus. nac. Rio de J. (Zool.) no. 97 1949.

Pachycentrinus gen. n. (Baridinae) *convexicollis* sp. n. Argentina p. 111, HUSTACHE t.c.

Pachycerus borrae sp. n. Italy; *planirostris* characters p. 50; key to European spp. p. 52, SOLARI Boll. Soc. ent. ital. 80.

Pachytychius setosus sp. n. Fr. Sudan p. 209, MARSHALL Mém. Inst. franç. Afr. noire no. 10.

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Paragarnia pectoralis sp. n. Brazil p. 89, HUSTACHE op. cit. no. 97 1949.

Parallelosomus key to spp., *corymbosae* sp. n. Brazil p. 477 figs., BONDAR Rev. Ent., Rio de J. 21.

Parasaldius elegantulus p. 135, *bifasciatus*, *bondari* p. 136 Brazil, *prosternalis* Fr. Guiana, *ruficornis* Argentina p. 137 spp. n., HUSTACHE Bol. Mus. nac. Rio de J. (Zool.) no. 97 1949.

Parasystatiella agrestis p. 75, *arctipes* spp. n. Tanganyika; key to spp. p. 76, MARSHALL Ent. mon. Mag. 86.

Pardisomus multiguttatus sp. n. Fr. Guiana p. 28, HUSTACHE Bol. Mus. nac. Rio de J. (Zool.) no. 95 1949.

Paulsenius subcostata Waterh., *carinicollis* Blanch. (with var. *caudiculata* Fairm.), *percostata* Fairm. & Ger. (= *Cylindrorhinus costatus* Redt. p. 13), *cupreosquamosa* Ger., *thermarum* Ger. from *Listroderes*; *sordidus* Burn. (= *Listroderes schythei* Ger. p. 13) from *Cylindrorhinus* p. 12, KUSCHEL Agric. tecn., Chile 10.

Pentarthrum castaneum Blanch. (= *Cossonus nigropiceus* Phil., *P. nitidum* Woll., *P. affine* Woll.) p. 21, KUSCHEL t.c.

Peridinetus geniculatus p. 12, *similaris* p. 16 Ecuador, *rufescens* p. 12, *rubripes* p. 13, *nigripes* p. 14, *circumcinctus* p. 15, *albicollis* p. 18 Peru, *songoensis* p. 13, *quinquemaculatus* p. 14, *erythrocephalus* (also Fr. Guiana) p. 17, *incisicollis*, *femoralis* p. 20 (with var. n. *brasiliensis* Brazil p. 21) Bolivia, *bondari* p. 16, *humilis* (also Colombia) p. 17 Brazil, *variegatus* Colombia p. 19 spp. n., HUSTACHE Bol. Mus. nac. Rio de J. (Zool.) no. 95 1949.

Peristoreus Kirsch (= *Dorytomodes* Mshl.) p. 197; *innocens* Kirsch (= *D. dracophyllae* Broun) p. 198 figs., GOURLAY Trans. Proc. roy. Soc. N.Z. 78.

Peritelus henoni see *Ripetelus*.

Philippius superbus Reed (= *insignis* Ger.); *laesicollis* Fairm. & Ger. (= *Anchorus planipennis* Chevr.) from *Heilipus* p. 13, KUSCHEL Agric. tecn., Chile 10.

Philonis crucifer Brèth. from *Cryptorhynchus* p. 18, KUSCHEL t.c.

Pholicodes rosti Stierl., *trivialis* Boh. synonymy discussed p. 38; *letourneuxi* Desbr. (= *nigrosparsus* Reitt.) p. 37, SOLARI Mem. Soc. ent. ital. 29.—*P. oertzeni* see *Strophomorphus sublaevigatus*.

Phyllerythrurus laetus Er. (= *luteus* Hust.) from *Sphenophorus* p. 20, KUSCHEL Agric. tecn., Chile 10.

Phyllobius (Dieletus) argentatus var. n. *auratus*, *atripes* p. 194; (*Ustavenus*) *xanthocnemus* var. n. *varicolor*, *griseus* p. 196; (*U.*) *piri* var. n. *denudatus* p. 198; (*P.*) *alpinus* var. n. *pallens* p. 207; (*P.*) *maculicornis* var. n. *tibialis* p. 208 France figs., HOFFMANN Fn. de France 52.

Phytonomus ornatipennis, *lineaticollis*, *minutus* see *Hyperodes*.

Platyaspistes glaucus Fhs. (= *alternans* Fhs.); *prasinus* Er. (= *limbatus* Chevr.); *marginalis* Fhs. (= *validus* Chevr.); *lateralis* Chevr. (= *prasinus* var. Fhs.); *argentinensis* n. n. for *alternans* Bruch 1914, HUSTACHE 1938 p. 11, KUSCHEL Agric. tecn., Chile 10.

Platyomus cinerascens see *Mionarthrus*.

Placomas apicalis p. 140, *albofasciatus*, *variegatus* p. 141, *bellus* p. 142 Bolivia, *brevisetis* Paraguay p. 143 spp. n., HUSTACHE Bol. Mus. nac. Rio de J. (Zool.) no. 97 1949.

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Polydius caelestinus Perty (= *orbignyi* Chevr.) p. 12, KUSCHEL Agric. tecn., Chile 10.

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Pseudomesites aberdarensis sp. n. Kenya p. 743, MARSHALL Ann. Mag. nat. Hist. (12) 3.

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Scolytoidea of Indo-Malaya, with
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II, SCHEDL Ann. Mag. nat. Hist. (12)
3 pp. 892–900.

African Scolytidae, SCHEDL Bull.
Inst. Sci. nat. Belg. 26 no. 50, 36 pp.

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Cyrtogenius tuberculifer sp. n. Madagascar p. 109, SCHEDL Mém. Inst. sci. Madagascar 4A.

Dacryphalus cylindrus sp. n. Malaya p. 647, BROWNE Ann. Mag. nat. Hist. (12) 3.

Hapalogenius congonus sp. n. Belg. Congo p. 206, SCHEDL Rev. Zool. Bot. afr. 43.

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Streptocranus penangensis sp. n. Malaya p. 645, BROWNE Ann. Mag. nat. Hist. (12) 3.—*S. recurvus* see *Xyleborus bicuspidis*.

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Thamnurgus interpunctatus sp. n. Madagascar p. 105, SCHEDL Mém. Inst. sci. Madagascar 4A.

Tosaxyleborus gen. n., *pallidipennis* sp. n. Japan p. 49, MURAYAMA Trans. Shikoku ent. Soc. 1.

Tricolus gracilipennis Brazil p. 170, *perdiligens* Jamaica p. 171 spp. n., SCHEDL Dusenia 1.

Trypodendron tropicum sp. n. Malaya p. 648, BROWNE Ann. Mag. nat. Hist. (12) 3.

Trypographus gen. n., *joveri* sp. n. Ivory Coast p. 213, SCHEDL Rev. franç. Ent. 17.

Xyleborus subadjunctus S. Rhodesia p. 28, *discrepans* p. 29, *peramplus* p. 31 Tanganyika, *albizzianus* p. 30, *cuneipennis* p. 31 Belg. Congo, *oblongus* Seychelles p. 32 spp. n., SCHEDL Bull. Inst. Sci. nat. Belg. 26 no. 50.—*X. dasyurus* p. 645, *foveicollis* p. 646 spp. n. Malaya, BROWNE Ann. Mag. nat. Hist. (12) 3.—*X. neardus* n. n. for *minor* Swaine nec Stebb.; *bicuspidis* Egg. (= *Streptocranus recurvus* Browne); *proximus* Egg. identity discussed p. 893; *costatomorphus* p. 897, *granularis* p. 898 Australia, *criticus* Andamans,

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Xylechinus valdivianus sp. n. Chile p. 15, EGgers Zool. Anz. 139 1942.

Xylocleptes concavifrons p. 207, *usambaricus* p. 208 spp. n. E. Africa, SCHEDL Rev. Zool. Bot. afr. 43.

Xyloterus ashuensis sp. n. Japan p. 51, MURAYAMA Trans. Shikoku ent. Soc. 1.

PLATYPODIDAE.

African Platypodidae, SCHEDL Bull. Inst. Sci. nat. Belg. 26 no. 50, 36 pp.

Crossotarsus diagnostic characters; *longicollis* sp. n. Malaya p. 649, BROWNE Ann. Mag. nat. Hist. (12) 3.

Doliopygus nairobiensis ♀ p. 215; *dolosus* sp. n. Belg. Congo p. 216, SCHEDL Rev. franç. Ent. 17.—*D. subnotatus* Cameroons, *deruptus* Rhodesia p. 35 spp. n.; *bilobatus* ♀ p. 36, SCHEDL Bull. Inst. Sci. nat. Belg. 26 no. 50.

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Brentids of Air, Fr. Sudan, DE MUIZON Mém. Inst. franç. Afr. noire no. 10 p. 212.

Agriorrhynchus klapperichi sp. n. China p. 24 fig., KLEINE Ent. Bl. 45-46.

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Anthribidae of Parc nat. Albert, Belg. Congo, JORDAN Explor. Parc nat. Albert, Miss. de Witte fasc. 70 pp. 17-20.

Anthribidae of Moson, Hungary, RéVY & SIROKI Folia ent. hung. 7 1942 p. 74.

Araecerus viellardi larva p. 88 figs., COHIC Rev. franç. Ent. 17.

Litocerus phygus ♂ p. 18, JORDAN Explor. Parc nat. Albert, Miss. de Witte fasc. 70.

Phloeobius alternans larva p. 15 figs., MATHUR Indian For. Rec. (N.S.) Ent. 8.

Rawasia annulipes larva p. 13 figs., MATHUR t.c.

Tropideres Japanese spp. pp. 48-51 [in Japanese] figs., UNO Ent. Rev. Jap. 5.

Longicornia.

Additions to list of Longicornia of Palestine, HEYROVSKÝ Acta Soc. ent. Čsl. 47 pp. 14-15.

Annotated list of Utah Cerambycidae, KNOWLTON & Wood Bull. Brooklyn ent. Soc. 45 pp. 10-13.

Longicorns collected in Liberia, LEPESME Bull. Inst. franç. Afr. noire 12 pp. 395-400, 1 fig.

Some little known Longicorns from W. Africa, LEPESME Longicornia 1 pp. 557-561, 8 figs.

Catalogue of Cerambycoidea of Australia, McKEOWN Mem. Aust. Mus. no. 10 1947 190 pp.

Some Cerambycoidea from Persia, MIRZAYAN Ent. Phytopath. appl., Teheran no. 10 pp. 12-19.

Cerambycidae of Air, Fr. Sudan, VILLIERS Mém. Inst. franç. Afr. noire no. 10 pp. 199-201, 1 fig.

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Stolidodere dequaei sp. n. Belg. Congo p. 56 figs., BASILEWSKY Rev. Zool. Bot. afr. 44.

CERAMBYCIDAE.

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Arrhythmus fenestratus Belon (= *mylenae* Boppe, *verruca* Jord.) from *Phymatechus* p. 557 fig., LEPESME Longicornia 1.

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Chapaon rufum var. n. *ruficorne*; *apicale* var. n. *pallidum* Tonkin p. 5, PIC op. cit. I 1940.

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Chlorophorus impressithorax sp. n. Kashmir; *varius* var. n. *mounieri* Annam p. 6; *notabilis* var. n. *jeanvoinei* Tonkin p. 7; *michelii* sp. n. China, Tonkin p. 11, PIC Echange 66.—*C. annularis* var. n. *subnebulosus* Indo-China p. 3, PIC Echange Num. spéc. (Opusc. mart. IX) 1943.—*C. dureli*, *lepesmei* spp. n. Bhutan p. 507, PIC Longicornia 1.

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Revision of Gnomini, DILLON, L. S. & E. S. Philipp. J. Sci. 79 pp. 11–55, 3 pls.

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Coptosia ganglbaueri ab. n. *nigro-suturata* Palestine p. 14, HEYROVSKÝ Acta Soc. ent. Čsl. 47.

Coresthetra alternata Cart. from *Mesolita*; *elongata* Broun from *Somatidia* p. 95, BREUNING Longicornia 1.

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Dioxippe see *Centrura*.

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Dyenmonus (*Vittatodyenmonus* sub-gen. n.); (*V.*) *trivittatus* f. n. *rufiventris*; (*V.*) *nigrifrons* ff. n. *vittireducta*, *verticerufa* p. 18; *fissilis* f. n. *postscutellaris* p. 19 Belg. Congo, BREUNING Ann. Mus. Congo belge (Sér. 8°) Sci. zool. **4**.—*D. cristipennis* sp. n. Belgian Congo p. 20, BREUNING Bull. Inst. Sci. nat. Belg. **26** no. 12.

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Eunidia unicolor p. 8, *varipes* spp. n. India; *tripunctata* subsp. n. *nigricornis* Belgian Congo p. 9, BREUNING Bull. Inst. Sci. nat. Belg. **26** no. 12.—*E. strigatooides* var. n. *anticefusca* Abyssinia p. 534; *rufescens* subsp. n. *nigeriae* Nigeria p. 535, BREUNING Longicornia 1.—*E. breuningae* sp. n. Fr. Sudan p. 201 figs., VILLIERS Mém. Inst. franç. Afr. noire no. 10.

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Falsomonohammus gen. n., *diverseglabratus* sp. n. Annam p. 3, Pic Echange Num. spéc. (Opusc. mart. IX) 1943.

Falsonyctopais gen. n. p. 473,
lamottei sp. n. Fr. Guinea p. 474,
 LEPESME C.R. 13e Congr. int. Zool.
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Falsotrachystola gen. n. for *Trachystola asidiformis* Pic p. 218 fig.,
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Freia (F.) *flavosternalis* sp. n.
 Ivory Coast p. 93, LEPESME Bull.
 Mus. Hist. nat., Paris (2) 22.

Gerania bosci var. n. *confluens*
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 (*G.*) *adelpha* f. n. *insulicola* Fernando
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divisa p. 14, *atropubens* p. 16 Tonkin,
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theresae Cochin-China p. 15, *adunaria*
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 X) 1943.—*G.* *bistrimaculata* Suma-
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Gleneonupserha *vaga* ff. n. *sub-*
vitticollis, *rufipes* p. 14, *rufoantennalis*,
bivittipennis; *vitticollis* sp. n.
 (with f. n. *vittipennis*); *elongata* ff. n.
basinigricollis, *subhumeralis* p. 15
 Belg. Congo, BREUNING Ann. Mus.
 Congo belge (Sér. 8°) Sci. zool. 4.—*G.*
vaga f. n. *uniformis* locality un-
 known p. 32, BREUNING Bull. Inst.
 Sci. nat. Belg. 26 no. 12.

Gnoma key to spp. p. 25; *agroides*
 Thoms. (= *albotessellata* Blanch.,
pseudosuturalis Schwarzer) p. 31;
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lombokia Sunda I., *sangiria* Sanghir I.
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Graciella brunneomaculata ab. n.
mediomaculata Ivory Coast, Guinea p. 432, LEPESME & BREUNING Longicornia 1.

Gracilinitocris gen. n., *nigrifrons* sp. n. Belg. Congo p. 32, BREUNING Ann. Mus. Congo belge (Sér. 8°) Sci. Zool. 4.

Grynx Pasc. (= *Spinestima* Pic) p. 372; *martini* All. (= *divaricata* Pic) p. 374, BREUNING Longicornia 1.

Gyarus siamensis sp. n. Siam p. 533, BREUNING t.c.

Hestimoides (*Ochrestimoides* subgen. n.) *ochreovittatus* sp. n. Russell I. p. 530 fig., BREUNING t.c.

Heteroclytomorpha *sormeoides* subsp. n. *salomonum* Solomon Is. p. 332, BREUNING t.c.—*H. brunnea* see *Heterometopia*.

Heterometopia gen. n. for *Heteroclytomorpha* *brunnea* Auriv. p. 334, BREUNING Longicornia 1.

Hirteschopalaea *indica* see *Paraxenolea*.

Homonoea Newm., *Urocalymna* Westw. a subgen. p. 324; (*H.*) *rotundipennis* Batjan p. 326, *albosignata* Samar, P. I. spp. n.; *samarana* Hell. from *Mulciber* p. 328 fig., BREUNING Longicornia 1.

Homonoeomorpha see *Bumetopia*.

Hoplathemistus Auriv. a genus not subgen. of *Athemistus* p. 130; *albofasciatus* Auriv. (= *Microtragus bimaculatus* Cart.) p. 131; *discospinosus* Cart. from *M.* p. 132, BREUNING Longicornia 1.

Hoplistocerus *prominulosus* sp. n. Brazil p. 95 fig., LANE Dusenia 1.

Hoplocris *albithorax*, *albovittatus*, *griseovittatus* see *Paradocus*.

Hoplontotus *subarmatus* see *Cleptonotus*.

Hyagnis basicristatus sp. n. Burma p. 8, BREUNING Ark. Zool. 42A no. 15.

Hyllisia albolateralis, *flava* spp. n. India p. 259, BREUNING Indian For. Rec. (N.S.) Ent. 7.

Hypsioma viridis sp. n. Brazil p. 537, GILMOUR Rev. Ent., Rio de J. 21.—*H. charilla* ♂ p. 545, GILMOUR Longicornia 1.

Ichneumonitocris subgen. n. (type *ichneumon* Hintz) see *Vespinitocris*.

Ichthyodes (*Orinoeme*) *punctata* var. n. *albisparsa* Moluccas p. 530, BREUNING Longicornia 1.

Imantocera key to spp. p. 13; *penicillata* Hope (= *olivieri* Thoms., *arenosa* Pasc.) p. 15; *plumosa* Ol. (= *borneotica* Breun.) p. 17; *niasensis* subsp. n. *dejungi* Sumatra p. 19; *grisescens* sp. n. Java p. 21 figs., DILLON L. S. & E. S. Philipp. J. Sci. 79.

Itaituba gen. n. p. 97, *truncata* sp. n. Brazil p. 98 fig., LANE Dusenia 1.

Laevisoma subgen. n. (type *laevior* Broun) see *Somatidia*.

Laodaxata subgen. n. (type *laosensis* sp. n.) see *Daxata*.

Laraesima *densepunctata* sp. n. Brazil p. 535, BREUNING Longicornia 1.

Latisternum lunulatum see *Paratheocris*.

Leiopus punctulatus ab. n. *humero-fasciatus* Austria p. 20 figs., PODANÝ Acta Soc. ent. Čsl. 47.

Lepromoris gibba Br. (= *asperatum* Thoms.) p. 195 fig., BREUNING Longicornia 1.

Leptodocus see *Planodema*.

Leuconitocris subgen. n. (type *leucostigma* Har.) see *Dirphya*.

Loboberea gen. n. for *Oberea* *pygidialis* Gah. (with f. n. *trimaculata* Sumatra p. 200) p. 199, BREUNING Ann. Mus. Stor. nat. Genova 64.

Menesida marginalis f. n. *niasica* Nias; *fuscicornis* sp. n. Sumatra p. 200, BREUNING t.c.

Mesathemistus gen. n. for *Athemistus aberrans* Cart. p. 120, BREUNING Longicornia 1.

Mesechthistatus gen. n. for *Echthistatus binodosus* Wat. p. 222, BREUNING t.c.

Mesolita scutellata Lea (= *simplicicollis* Auriv.) p. 100, BREUNING t.c.—*M. alternata* see *Corestheta*.

Microabryna see *Bumetopia*.

Microcleptes araneus Newm.
(*=blanchardi* Thoms., *hemisphaerica* Blanch.) p. 144; *variolosus* F. & G.
(*=globulosus* Thoms., *sphaeroides* T.) p. 145 fig., BREUNING Longicornia 1.
—*M. clavipes* see *Cleptosoma*; *albo-*
maculatus see *Cleptonotus*.

Microcyclos coomani sp. n. Tonkin
p. 13, Proc Echange Num. spéci.
(Opusc. mart. XIII) 1944.

Microcymatura gen. n. p. 386,
antennalis sp. n. Cameroons, Ivory
Coast, Gaboon, Belg. Congo p. 387
fig., BREUNING Longicornia 1.

Microdorcadion laosense sp. n.
Laos p. 226 fig., BREUNING t.c.

Micromulciber see *Notomulciber*.

Microtragoides gen. n. for *Micro-*
tragus echinatus Cart. p. 130, BREUN-
ING Longicornia 1.

Microtragus Thoms. (*=Styphus*
Lac. p. 121); *arachne* var. n. *obscurus*
Australia; *eremita* Pasc., *junctus*
Blkb. p. 122, *sticticus* Pasc. varr. of
arachne Pasc.; *maculatus* Blkb. a
var. of *senex* White p. 123; *mormon*
Pasc. (*=albidus* Blkb., *assimilis* B.)
p. 124, BREUNING t.c.—*M. disc-*
ospinosus see *Hoplathemistus*; *bimacu-*
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Mimamblymora gen. n. p. 170,
flavescens sp. n. Somalia p. 171,
BREUNING Ann. Mus. Stor. nat.
Genova 64.

Mimasyngenes gen. n. p. 268,
lineatipennis sp. n. Argentina p. 269,
BREUNING Ark. Zool. (2) 1.

Mimodorcadion indicum Guér. (*=*
griseum Breun.) p. 202, BREUNING
Longicornia 1.

Mimohammus biplagiatus sp. n.
India p. 3, BREUNING Bull. Inst.
Sci. nat. Belg. 26 no. 12.

Mimoparmena see *Parmenomorpha*.

Mispila (M.) *apicalis* var. n.
transversefasciata Borneo; (M.) *cele-*
bensis Celebes, (*Dryusa*) *flavopunctata*
Philippines spp. n. p. 532, BREUNING
Longicornia 1.

Monochamus cristipennis Ivory
Coast, *subcribosus* Gaboon p. 512,
mausoni Tonkin p. 513 spp. n.,
BREUNING t.c.

Monoxenus (M.) *spinner* Kolbe
(*=approximatus* Breun.) p. 232;
(Dityloderus) balteatus Auriv. (*=Didy-*
modonta orientalis Breun.) p. 235;
nodosus Hintz p. 241, *bufoides* Jord.
p. 245 from *Apomempsis*; (*Bothynos-*
celis) *bispinosus* Jord. (*=Didymo-*
donta olivascens Auriv.) p. 245; (B.)
lujae Hintz (*=D. burgeoni* Breun.);
(B.) *horridus* var. n. *rotundipennis*
Belg. Congo p. 247 fig., BREUNING
t.c.

Mulciber samarana see *Homoneoa*.

Mynonebra dilatata see *Myno-*
parmena.

Mynoparmena gen. n. for *Mynone-*
bra dilatata Auriv. p. 51, BREUNING
Longicornia 1.

Mystrocnemis analis f. n. *flavi-*
pennis Congo p. 196, BREUNING
Ann. Mus. Stor. nat. Genova 64.—
M. flavaapicalis sp. n. (with f. n.
nigricollis) Belg. Congo p. 18, BREUN-
ING Ann. Mus. Congo belge (Sér. 8°)
Sci. zool. 4.

Nemaschema olivaceum sp. n. New
Caledonia p. 530, BREUNING Longi-
cornia 1.

Neonitocris gen. n. for *Nitocris*
princeps Jord. (type), *N. regina*
Jord., *N. luteiceps* Fairm., *N. emar-*
ginata Chevr., *N. servilis* Jord.,
N. leonis Jord., *N. atra* Jord., *N. thoracica*
Jord., *N. rubriventris* Hintz,
N. plicata Hintz, *N. modesta* F.,
N. nigripes Kolbe, *N. eulitopoides*
Lepesme p. 28; *regina* f. n. *rufes-*
centicollis; *rhodesica*, *ruficollis* p. 29
(with f. n. *basiinvittata*), *flavipes*,
rufipes p. 30, *ealensis* spp. n.; *atra*
ff. n. *rufiventris*, *rufescens* p. 31
Belg. Congo, BREUNING Ann. Mus.
Congo belge (Sér. 8°) Sci. zool. 4.

Niphoparmena Auriv. a genus not
subgen. of *Mecynome* p. 178, revision
of spp. pp. 178–191, BREUNING
Longicornia 1.

Nitocris tibialis ff. n. *flavosternalis*,
transeuns; *adorata* f. n. *immaculi-*
pennis; *lucasi* f. n. *nigroscapus*;
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p. 25; *nigriceps* f. n. *clarior* p. 26; *argyrostigma* f. n. *maculata* p. 27; *delecta* f. n. *basinigra* p. 28 Belg. Congo, BREUNING Ann. Mus. Congo belge (Sér. 8°) Sci. zool. 4.—*N. subjuvenca* Lourenço-Marqués p. 21, *kafakumbae* Belgian Congo spp. n.; *Cicatronicris* subgen. n. p. 22, BREUNING Bull. Inst. Sci. nat. Belg. 26 no. 12.—*N. rufoantennalis* sp. n. p. 197; *argenteovittata* f. n. *fuscicornis* p. 198 Fernando Po, BREUNING Ann. Mus. Stor. nat. Genova 64.—*N. princeps*, *regina*, *luteiceps*, *emarginata*, *servilis*, *leonis*, *atra*, *thoracica*, *rubriventris*, *plicata*, *modesta*, *nigripes*, *eulitopoides* see *Neonitocris*; *dux*, *morio*, *ichneumon* see *Vespinitocris*.

Nodulosoma subgen. n. (type *nodularia* Broun) see *Somatidia*.

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Trachystola asidiformis see *Falso-trachystola*; *dorcadionoides* see *Centruropsis*.

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Triammatus waigeuensis sp. n. Waigeu p. 219, GILMOUR Tijdschr. Ent. 92.

Trichestola gen. n., *guatemalana* sp. n. Guatemala p. 174, BREUNING Ann. Mus. Stor. nat. Genova 64.

Trichopocregyes gen. n., *mausoni* sp. n. Tonkin p. 521 fig., BREUNING Longicornia 1.

Trichomesosa similis sp. n. Tonkin p. 520, BREUNING t.c.

Trichopothyne hindostani sp. n. India p. 258, BREUNING Indian For. Rec. (N.S.) Ent. 7.

Trichoxylotoles subgen. n. (type *phormiobius* Broun) see *Xylotoles*.

Trigonoptera laevepunctata sp. n. New Guinea p. 529, BREUNING Longicornia 1.—*T. immaculata* p. 225, *albocollaris* p. 226 Japen I., *breuniniana* Dutch New Guinea p. 227, *neja* Koberi p. 229 spp. n.; *sulcata* var. n. *reversa* Waigeu p. 226; key to spp. p. 230 figs., GILMOUR Tijdschr. Ent. 92.

Urocalymna a subgen. of *Homonoea* q.v.

Vespinitocris gen. n. for *Nitocris dux* Jord. (type), *N. morio* Jord., *N. ichneumon* Hintz; *sessensis* sp. n. Victoria Nyanza p. 198, BREUNING Ann. Mus. Stor. nat. Genova 64.—*V. (Ichneumonitocris)* subgen. n. *ichneumon* ff. n. *vespiformis*, *rufoantennalis* Belg. Congo p. 31, BREUNING Ann. Mus. Congo belge (Sér. 8°) Sci. zool. 4.

Vittatodyenmonus subgen. n. (type *trivittatus* Auriv.) see *Dyenmonus*.

Xenolea Thoms. (= *Aeschopalaea* Pasc.) p. 272; *collaris* Thoms. (= *agraria* Pasc., *laticollis* P. *grisella* P.) p. 273, BREUNING Longicornia 1.

Xylorhiza adusta Wied. (= *venosa* Cast.) p. 403 fig., BREUNING t.c.

Xylotoles (X.) *griseus* F. (= *heteromorpha* Boisd., *lentus* Newm., *westwoodi* Guér., *subpinguis* White) p. 60; (X.) *lynceus* F. (= *angustulus* Broun) p. 66; (X.) *traversii* Pasc. (= *schauinslandi* Sharp); (*Trichoxylotoles* subgen. n. p. 67), BREUNING t.c.—*X. huttoni* see *Xylotolooides*.

Xylotolooides gen. n. for *Xylotoles* *huttoni* Sharp p. 69, BREUNING Longicornia 1.

Yochostyla see *Bumetopia*.

Zipoetopsis gen. n., *unicolor* sp. n. Paraguay p. 175, BREUNING Ann. Mus. Stor. nat. Genova 64.

BRUCHIDAE (LARIIDAE).

Bruchids of Air, Fr. Sudan, PIC Mém. Inst. franç. Afr. noire no. 10 p. 211.

Bruchidius angustior Brazil, *subnubilus* Colombia p. 10, *punctopygus* Bolivia, *ruficolor* Peru p. 11 spp. n., PIC Echange Num. spéc. (Opusc. mart. VII) 1942.

Bruchus vadoni Madagascar p. 5, *multialbolineatus* Guinea, *diversedenudatus* Sudan, *subcallosus* Kenya p. 6, (*Callosobruchus*) *griseocallosus* Eritrea p. 7 spp. n., PIC op. cit. VI 1942.—*B.* (*Pachybruchus*) *triangularifer* sp. n. Peru (with var. n. *multisparsus* Brazil) p. 10, PIC op. cit. VII 1942.—*B.* (*Acanthoscelides*) *sublineatus* p. 5, (*A.*) *antonioi* Congo, (*A.*) *nodieri* Gabon, (*A.*) *vinsoni* Mauritius, *multipunctatus* Abyssinia p. 6 spp. n., PIC op. cit. X 1943.

Diegobruchus rubroguttatus var. n. *rufipes*, *nigripes* Madagascar p. 16, PIC Echange 65 1949.

Pachymerus brevelineatus sp. n. Madagascar p. 4, PIC Echange 66.—*P. pallidus* var. n. *annulicornis* Fr. Sudan p. 211, PIC Mém. Inst. franç. Afr. noire no. 10.

Spermophagus diversipes sp. n. Madagascar p. 2, PIC Echange Num. spéc. (Opusc. mart. IV) 1941.—*S. senegalensis* var. n. *nigrodenudatus* Senegal p. 7, PIC op. cit. VI 1942.—*S. vadoni* Madagascar, *peruvianus* Peru spp. n. p. 10, PIC op. cit. VII 1942.—*S. pellaranae* sp. n. Brazil p. 15, PIC Echange 64 1948.

Urodon rufipes subsp. n. *ruteri*; *flavescens* var. n. *schaeferi* France p. 193, HOFFMANN Rev. franç. Ent. 17.

Zabrotes subfasciatus egg p. 62, larvae p. 64 figs., STEFFAN Mém. Mus. Hist. nat., Paris (N.S.) 21 1946.

Phytophaga.

List of Chrysomeloidea of Muri, Brazil, collected by Wittmer, I, BECHYNÉ Mitt. münchen. ent. Ges. 40 pp. 293–299.

Chrysomelidae of Air, Fr. Sudan, BRYANT Mém. Inst. franç. Afr. noire no. 10 p. 203.

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SAGRIDAEE.

Aulacoscelis costaricensis sp. n. Costa Rica p. 237, BECHYNÉ Ent. Arb., München 1.

Chilocxena transferred to Eumolpidae, q.v.

MEGALOPIDAE.

Megalopodidae of Parc nat. Albert, Belg. Congo, BRYANT Explor. Parc nat. Albert, Miss. de Witte fasc. 70 pp. 15–16.

Agathomerus atripes sp. n.; *subfasciatus* var. n. *interrupta*, *obliterata* Brazil p. 13, PIC Echange Num. spéc. (Opusc. mart. III) 1941.—*A. signatus* var. n. *brevenotatus*; *trifasciatus* sp. n. p. 15; *bifasciatus* var. n. *humeropunctatus*; *marginatus* var. n. *notatithorax* p. 16 Brazil, PIC op. cit.

VII 1942.—*A. (Longathomerus subgen. n.)*; *subfasciatus* var. n. *monrosi* p. 15; *4-maculatus* var. n. *guerini* p. 16 Argentina, PIC Echange 63 1947.

Colobaspis theresae sp. n. Congo; *nyassae* var. n. *lateniger* Nyasaland p. 15, PIC Echange 63 1947.—*C. interrupta* sp. n. Tanganyika p. 11, PIC Echange Num. spéc. (Opusc. mart. XIII) 1944.

Falsocolobapsis gen. n., *pilosus* sp. n. Gabon p. 15, PIC op. cit. VII 1942.

Kuilua reducta sp. n. Congo p. 7, PIC Echange 65 1949.

Longathomerus subgen. n. (type *humeralis* Serv.) see *Agathomerus*.

Mastostethus brasiliensis sp. n. (with var. n. *joliveti*) Brazil; key to allied American spp. p. 12 fig., PAPP Misc. ent. Paris 46 1949.—*M. theresae*, *obliquefasciatus* spp. n.; *4-notatus* var. n. *bistrinotatus*; *pallidofasciatus* var. n. *preapicalis* Peru p. 16, PIC Echange Num. spéc. (Opusc. mart. VII) 1942.—*M. apicalis* Brazil, *bogotensis* Colombia spp. n.; *6-plagiatus* var. n. *guatemalensis* Guatemala; *nigrocinctus* var. n. *rufoscutus*, *atroscutus* p. 10, *bispunctatus* Mexico p. 11, PIC op. cit. VIII 1942.—*M. femoralis* sp. n. p. 14; *lateritius* var. n. *paulonotatus*; *7-notatus* var. n. *semiobliteratus*; *cardinalis* var. n. *multimaculatus* p. 15 Brazil, PIC Echange 64 1948.

Megalopus thoracicus var. n. *luteo-notatus*, *nigrolineatus*, *insignata* Brazil p. 13, PIC Echange Num. spéc. (Opusc. mart. III) 1941.—*M. armatus* var. n. *subobliteratus*, *interruptus*, *subuniformis* Brazil p. 8, PIC op. cit. VI 1942.

Plesioagathomerus canus var. n. *bilineatus*, *atrodiscalis* Argentina p. 16, PIC Echange 63 1947.

Poecilomorpha robusta sp. n. Sierra Leone p. 11, PIC Echange Num. spéc. (Opusc. mart. XIII) 1944.

Sphondylia subparallelia sp. n.; *bicoloriventris* var. n. *obscurior* Gabon; *thoreyi* var. n. *rufa* Fr. Equat. Africa p. 15, PIC op. cit. VII 1942.

Tennaspis bicoloripennis sp. n. Siam p. 14, PIC t.c.—*T. bonneuili* sp. n. Siberia p. 15, PIC Echange 63 1947.

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Orsodacna lineola var. n. *innocentipennis* Germany, *luteoapicalis* Euboea p. 15, PIC Echange Num. spéc. (Opusc. mart. V) 1941.

CRIOCERIDAE.

Crioceris 14-punctata var. n. *nigripes* Trieste p. 76; *merdigera* subsp. n. *forojuliensis* Italy p. 77, MÜLLER Atti Mus. Stor. nat. Trieste 17 1948.

Lema coronata ab. n. *takanabensis* Japan p. 53 fig., [Author's name in Japanese] Ent. Rev. Jap. 5.—*L. testaceilabris* sp. n. Fr. Sudan p. 203, PIC Mém. Inst. franç. Afr. noire no. 10.—*L. unicoloripes* Uruguay, *variornata* Bolivia spp. n.; *dorsalis* var. n. *mediosignata*, *trisignata*, *bisignata* Brazil, *medionotata*, *unisignata* Uruguay; *confusa* var. n. *diverselineata* Brazil, *internejuncta* Cuba, *insignata* p. 9, *externesignata* p. 10 Haiti, PIC Echange 63 1947.—*L. rufoapicalis* p. 11, *mediafasciata*, *bicoloripes* Java, *spinotibialis*, *barbieri*, *nigrofasciata* Cochin China p. 12 spp. n., PIC Echange 65 1949.—*L. nathani* sp. n. S. India p. 14, PIC Echange Num. spéc. (Opusc. mart. II) 1941.—*L. 5-vittata* p. 14, *bilunulata* p. 15 Argentina, *rubrofasciata* p. 14, *adonis*, *albonotata*, *viridicollis* p. 15, *excavata*, *semicruciata*, *petaini*, *instriata*, *darlani* p. 16 Brazil, *flava* Mexico, *laglaisei* Venezuela p. 14, *curtelineata*, *fenestrata* Colombia p. 15 spp. n., PIC op. cit. III 1941.—*L. angusticollis* p. 3, *fortesculpta*, *externenotata*, *anceyi*, *hansaensis* p. 4, *diversenotata*, *gounellei* p. 6, *subexclamationis*, *inexclamationis*, *reductesuturalis* p. 7, *prelateralis*, *latevittata*, *brevehumeralis* p. 8, *latemarginata* p. 9, *pardoensis*, *nigroverticalis*, *bistrinotata* p. 10, *minasensis*, *viridiceps* (with var. n. *friburgoensis*), *janeiroensis*, *matasinhosa* p. 11, *latrix*, *rufo-basalis*, *pauloensis*, *lemoni* p. 12, *clermonti*, *diversivittata*, *baturiensis* p. 13, *annulicornis*, *annulimembris* p. 14 Brazil, *patinoi* Munijales p. 4, *ruficeps*, *viridifasciata*, *postreducta*

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Plectonycha atrolineata *Argentina, nigrosignata* *Brazil* spp. n. p. 12, PIC t.c.

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Aethomorpha latenigra sp. n. India p. 8, PIC Echange Num. spéc. (Opusc. mart. VI) 1942.—*A. externesignata* sp. n. S. India p. 16, PIC op. cit. IX 1943.

Antipa (Titubaea) quadripunctata sp. n. Fr. Sudan p. 204, PIC Mém. Inst. franç. Afr. noire no. 10.

Ceratobasis innotatithorax sp. n. (with var. n. *imbasalis*) India p. 16, PIC Echange Num. spéc. (Opusc. mart. IX) 1943.—*C. discoidalis* (with var. n. *paulofasciata*), *binotaticeps*

(with var. n. *unireduceata, oblitterata*) spp. n. India p. 8, PIC op. cit. XI 1943.

Clytra nathani p. 13, *subfasciata* p. 14 spp. n. India, PIC op. cit. III 1941.—*C. nathani* var. n. *paulosignata, postfasciata; subfasciata* var. n. *octonotata; subopacipennis, bonneuli* p. 15, *brevipennis* (with var. n. *octomaculata*), *uninotata* p. 16 spp. n. India, PIC op. cit. IX 1943.—*C. reducetefasciata, bipartita* spp. n.; *succincta* var. n. *inhumeralis* S. India p. 14, PIC op. cit. XI 1943.

Clytrasoma nathani sp. n. India p. 8, PIC t.c.

Coptocephala key to some spp. p. 80, MÜLLER Atti Mus. Stor. nat. Trieste 17 1948.—*C. cheni* China p. 8, *testaceocincta* S. India p. 13 spp. n., PIC Echange Num. spéc. (Opusc. mart. XI) 1943.—*C. destinoi* var. n. *latenotata* Syria p. 4, PIC Echange 65 1949.—*C. diversiceps* var. n. *villiersi* Fr. Sudan p. 204, PIC Mém. Inst. franç. Afr. noire no. 10.

Cyaniris diversiceps Tonkin, *piceifrons* p. 15, *atropyga* p. 16 India spp. n., PIC Echange Num. spéc. (Opusc. mart. II) 1941.—*C. submarginata* (with var. n. *plurisignata*), *rufobasalis* (with var. n. *rufosignata, diversenotata*) S. India, *arcuatecincta* Annam spp. n. p. 15, PIC op. cit. XI 1943.

Diapromorpha unifasciata sp. n. S. India p. 16, PIC op. cit. IX 1943.—*D. nathani, brevelineata* spp. n. S. India p. 14, PIC op. cit. XI 1943.—*D. (Aethomorpha) minuta* sp. n. Fr. Sudan p. 203, PIC Mém. Inst. franç. Afr. noire no. 10.

Lachnaea longipes, italicica characters p. 77, MÜLLER Atti Mus. Stor. nat. Trieste 17 1948.

Merilia lunulata var. n. *trisignata* India p. 8, PIC Echange Num. spéc. (Opusc. mart. VI) 1942.

Miochira unifasciata sp. n. India (with var. n. *inhumeralis* Malacca) p. 15, PIC op. cit. II 1941.

Miopristis multisignatus sp. n. Kenya p. 7, PIC Echange 65 1949.

Pantocometis juncta sp. n. S. India p. 14, PIC Echange Num. spéc. (Opusc. mart. XI) 1943.

Peploptera quinquesignata sp. n.
Kenya p. 7, PIC Echange **65** 1949.

Pseudoclytra externesignata sp. n.
S. India p. 15, PIC Echange Num. spéc. (Opusc. mart. IX) 1943.

Titubaea 13-punctata var. n. *kocheri*
Morocco p. 16, PIC Echange **65** 1949.

CRYPTOCEPHALIDAE.

Characters of Neotropical Chlamisinae, MONRÓS Rev. bras. Biol. **10** pp. 409-424, 24 figs.

Acolastus inaequalis sp. n. Fr. Sudan p. 203, PIC Mém. Inst. franç. Afr. noire no. 10.

Chlamisus bolivianus subsp. n. *bowditchi* Peru p. 415; *oropedium* (also Guiana) p. 416, *octomaculatus* p. 418, *mimicus* (also Bolivia, Argentina) p. 420, *goeldii* p. 421, *pseudomaculatus* p. 423 spp. n. Brazil figs., MONRÓS Rev. bras. Biol. **10**.

Coenobius subsemicinctus (with var. n. *hanoiensis*) Indo-China p. 15, *bicolor* S. India p. 16 spp. n., PIC Echange Num. spéc. (Opusc. mart. XI) 1943.

Cryptocephalus cordiger ab. n. *nigripes* Dalmatia; *parvulus* var. n. *devillei* Corsica p. 85; *pini* ab. n. *apiceflavus* Alps p. 86; *signatifrons*, *flavipes* characters p. 87; *turcicus* ab. n. *luctuosus* Zara; *ocellatus* var. n. *montanellus* Trieste p. 88; *vittula* subsp. n. *mediterraneus* Sicily, Dalmatian Is., *picticollis* Istria p. 90; *macellus* ab. n. *pseudoconnexus* Venezia Giulia p. 91, MÜLLER Atti Mus. Stor. nat. Trieste **17** 1948.—*C. gridellii* sp. n. Italy p. 55 figs., BURLINI Boll. Soc. ent. ital. **80**.—*C. columbinus* p. 85 (with ab. n. *columbiciformis* p. 86), *nigropunctatus* p. 87 spp. n. Colombia figs., PAPP Bol. Soc. portug. Ciênc. nat. **18**.—*C. abyai* Colombia, *marginemaculatus* S. Brazil spp. n. p. 15; *nanulus* characters p. 16 figs., PAPP Misc. ent. Paris **46** 1949.—*C. externepunktus* sp. n. Congo p. 11, PIC Echange **64** 1948.—*C. bedeli* var. n. *mimeuri*; *rufipes* var. n. *timhaditus* Morocco p. 16, PIC Echange **65** 1949.—*C. rossii* var. n. *schaeferi*; *podager* var. n. *alberensis* France; *bouriensis* Ethiopia, *indicus*, *longicornis* India, *vitticollis* Tonkin spp. n. p. 5, PIC Echange

• *C. atroapicalis*, *jurandanus*, *natans*, *trinotaticeps*, *flavoscutus* p. 14, *nigroscutus* p. 15 spp. n. India, PIC Echange Num. spéc. (Opusc. mart. II) 1941.—*C. bidens* var. n. *semi-limbaticollis* Salonica p. 15, PIC op. cit. V 1941.—*C. fainanensis* Formosa p. 8, *subsubturalis* Saigon, *luteopectoralis* p. 9, *bicolorepygidialis* India, *luteodecemmaculatus* Tonkin p. 16 spp. n., PIC op. cit. XI 1943.

Melixanthus brunneosignatus (with var. n. *innotatipennis*) sp. n. S. India p. 16, PIC t.c.

Pachybrachys pradensis var. n. *schaeferi* France p. 14, PIC Echange **64** 1948.—*P. indicus* sp. n. S. India p. 15, PIC Echange Num. spéc. (Opusc. mart. XI) 1943.—*P. tessellatus* var. n. *melanopygus* Macedonia; *exclusus* Rey a good sp. and not ab. of *tessellatus* p. 84, MÜLLER Atti Mus. Stor. nat. Trieste **17** 1948.

Stylosomus flavus Mars. (= *obscuritarsis* Pic); f. subsp. n. *caucasicus* Caucasus p. 85, MÜLLER Atti Mus. Stor. nat. Trieste **17** 1948.—*S. (Microstilus) maroccanus* sp. n. Morocco p. 94, PIC C.R. Soc. Sci. nat. Maroc **1950** no. 6.

EUMOLPIDAE.

Provisional list of Eumolpids of Argentina, BECHYNĚ Acta zool. lilloana **8** 1949 pp. 457-535, 6 figs.

Notes on Central and S. American Eumolpids, BECHYNĚ Mitt. münchen. ent. Ges. **40** pp. 245-263, 6 figs.

List of types of Eumolpid genera occurring in Centr. & S. America, BECHYNĚ Mitt. münchen. ent. Ges. **40** pp. 264-292, 2 figs.

Agbalus vianai Argentina p. 496, *continuus* Peru p. 497 spp. n.; *nitidissimus* Er. from *Chalcophana* p. 498 figs., BECHYNĚ Acta zool. lilloana **8** 1949.—*A. coroicensis* sp. n. (with ab. n. *cyanescens* p. 251) Bolivia p. 250; *nitidissimus* abb. n. *surinamensis* Surinam, *cyaneoindutus* Peru, Bolivia p. 252 figs., BECHYNĚ Mitt. münchen. ent. Ges. **40**.—*A. all* spp. except *sericeus* Chap. see *Hylax*.

Agrianes bryanti Argentina p. 213, *andicola* Peru, Bolivia p. 214 spp. n., BECHYNĚ Ent. Arb., München **1**.—

A. validicornis abb. n. *bipartitus*, *nigerrimus* Argentina p. 482, BECHYNÉ Acta zool. lilloana 8 1949.

Alethaxius monrói p. 517, *argentinensis* p. 518 spp. n. Argentina, BECHYNÉ t.c.—*A. atricornis* Er. from *Chalcophana* p. 250; *varians* sp. n. p. 296 (with abb. n. *muriensis*, *elytralis* p. 297) Brazil, BECHYNÉ Mitt. münchen. ent. Ges. 40.—*A. verrucosus* see *Wittmerita*.

Allocolaspis gen. n. p. 81, *halli* (type) Fr. & Br. Guiana, *taylori* Trinidad spp. n. p. 82, BECHYNÉ Ann. Mag. nat. Hist. (12) 3.—*A. straeleni* sp. n. Brazil p. 9, BECHYNÉ Bull. Inst. Sci. nat. Belg. 26 no. 54.—*A. nocturna* sp. n. Br. Guiana p. 254, BECHYNÉ Ent. Arb., München 1.—*A. perplexa* Jac. from *Colaspis* p. 255, BECHYNÉ Mitt. münchen. ent. Ges. 40.

Amasia includes Indo-Australian spp. placed in *Colaspoides* by Junk-Schenkling p. 291, BECHYNÉ t.c.

Anguleumolpus villiersi sp. n. Fr. Sudan p. 206, PIC Mém. Inst. franç. Afr. noire no. 10.

Antitypona includes all spp. placed by Junk-Schenkling in *Lamprosphaerus* p. 270, BECHYNÉ Mitt. münchen. ent. Ges. 40.—*A. 4-maculata* abb. n. *obsoletens* Argentina, *confluens* Bolivia, subsp. n. *rugulosa* Paraguay; *ruficeps* ab. n. *taracuensis* Brazil p. 209; *fulvifrons* abb. n. *virescens*, *cyaneoviolacea* Fr. Guiana, Brazil; *kuscheli* sp. n. Bolivia p. 210, BECHYNÉ Ent. Arb., München 1.—*A. dilatata* sp. n. Brazil p. 2 fig., BECHYNÉ Bull. Inst. Sci. nat. Belg. 26 no. 54.—*A. hebe* abb. n. *haemorrhoidalis*, *obscurata* Amazonas, *maronica* Fr. Guiana p. 480, BECHYNÉ Acta zool. lilloana 8 1949.

Balya picta abb. n. *obscuripennis*, 4-punctata, 6-notata, *reducta* Bolivia p. 483, BECHYNÉ t.c.

Bechyneia from Chrysomelidae p. 3 fig., JOLIVET Bull. Inst. Sci. nat. Belg. 26 no. 56.

Callicolaspis gen. n. for *Colaspis heros* Lef. (type), *C. eumolpoides* Lef., *C. munifica* Er. p. 275, key p. 276; *cuneiformis* Peru, Mexico, *ellifranzaeana* Bolivia spp. n. p. 277, BECHYNÉ Mitt. münchen. ent. Ges. 40.

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 1940.

Pygocolaspis gen. n. for *Colaspis*
olivieri Lef. p. 245, BECHYNÉ Ent.
 Arb., München 1.

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Rhembastus apicalis Tanganyika, *impressicostatus* Dimbroko spp. n. p. 9, PIC Echange Num. spéc. (Opusc. mart. I) 1940.—*R. asuefactus* sp. n. Madagascar p. 151, BECHYNĚ Bull. Soc. linn. Lyon 19.

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Sphaeropis aeruginosa Lef. (= *fruhstorferi* Jac. ♀) p. 524, BECHYNĚ Acta zool. lilloana 8 1949.

Spintherophyta characters; *submucronata* sp. n. Brazil p. 265, BECHYNĚ Mitt. münchen. ent. Ges. 40.—*S. lesueuri* ab. n. *cuprascens* Mexico p. 239, BECHYNĚ Ent. Arb., Münich 1.—*S. lampros*, *peruana* see *Ischyrolampra*.

Sterneurus fulgidus ab. n. *fallax* Brazil p. 225, BECHYNĚ Ent. Arb., Münich 1.

Sternocolaspis gen. n. for *Colaspis* 14-costata Lef. p. 13, BECHYNĚ Bull. Inst. Sci. nat. Belg. 26 no. 54.

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Susteria gen. n. for *Colaspoides* *trigonomera* Lef. (with ab. n. *arbusticola* Brazil) p. 236, BECHYNĚ Ent. Arb., Münich 1.

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Typophorus nigronotatus abb. n. *effusus*, *adjacens* Argentina p. 1089, BECHYNĚ Ann. Mag. nat. Hist. (12) 3.—*T. festinatus* sp. n. Paraguay p. 23, BECHYNĚ Bull. Inst. Sci. nat. Belg. 26 no. 54.—*T. signatus* abb. n. *ordinatus*, *erythropygus*, *piceoniger* Argentina p. 525, BECHYNĚ Acta zool. lilloana 8 1949.

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Chrysomelidae of Belg. Congo, BECHYNĚ Rev. Zool. Bot. afr. 44 pp. 119–131.

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Bechyneia gen. n., *spinosa* sp. n. Natal p. 36 figs., JOLIVET Bull. Ann. Soc. ent. Belg. 86.—Transferred to Eumolpidae, q.v.

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Longitarsus ganglbaueri subsp. n. *balachowskyi* Morocco p. 192, HOFFMANN Rev. franç. Ent. 17.—*L. swynnertoni* Ruwenzori p. 164, *salte* Kilimanjaro p. 165, *menthobius* S. Rhodesia p. 628 spp. n. figs., BRYANT Ann. Mag. nat. Hist. (12) 3.

Nonarthra nigrifrons sp. n. Papua p. 749 fig., BRYANT t.c.

Orestia pandellei All. p. 94, *electra* Gredl., *apennina* Weise p. 96 raised to spp., HEIKERTINGER Koleopt. Rdsch. 31.—*O. alpina* subsp. *mařani* see *Crepidodera cyanipennis* f. *piceoconcolor*.

Palaeothona picta Say from *Trachymetropa* p. 187; *arizonensis* Arizona, *rubroviridis* p. 180, *melanocyanea* p. 181 Mexico, *hoffmani* Haiti p. 183 spp. n. figs., BLAKE Proc. ent. Soc. Wash. 52.

Phyllotreta supplement to revision of Palaearctic spp.; *rectilineata* Chen (= *chinensis* Heikert.) p. 140; *costulata* Weise (= *impressicollis* Lab.) p. 141, HEIKERTINGER Koleopt. Rdsch. 31.

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Trachymetropa picta see *Palaeothona*.

GALERUCIDAE.

Aplosonyx valid to Chevr. 1838 not 1837 p. 86, HINCKS Ann. Mag. nat. Hist. (12) 3.

Apophylia theresae Abyssinia, *mauritanica* Mauretania spp. n. p. 1, Pic Echange Num. spéc. (Opusc. mart. XII) 1944.

Atrachya Dej. (= *Luperodes* Mots.) p. 86, HINCKS Ann. Mag. nat. Hist. (12) 3.

Aulacophora valid to Dup. & Chevr. 1842 p. 87, HINCKS t.c.

Cerotoma valid to Chevr. 1843 not 1837 p. 88, HINCKS t.c.

Diabrotica Chevr. 1844 status discussed p. 88, HINCKS t.e.

Diacantha Chevr. *unifasciata* Ol. designated type p. 87, HINCKS t.e.

Exora valid to Chevr. 1845 (type *detrita* F.) (= *Malacosoma* valid to Chevr. 1845) p. 87, HINCKS t.e.

Galerucella key to British spp. p. 153 figs., HINCKS J. Soc. Brit. Ent. 3.—*G. aenescens* all stages p. 22, WOO Peking nat. Hist. Bull. 19.

Luperodes see *Atrachya*.

Luperus viridipennis subspp. n. *gredleri*, *winkleri* Italian Alps; *gularis* subspp. n. *ruficeps* Yugoslavia p. 98, MÜLLER Atti Mus. Stor. nat. Trieste 17 1948.

Malacosoma see *Exora*.

Monolepta valid to Erichs. 1843 not Chevr. 1837 p. 87, HINCKS Ann. Mag. nat. Hist. (12) 3.

Neobrotica fasciata ab. n. *columbica* Colombia p. 15, PAPP Misc. ent. Paris 46 1949.

Ophraea majalis Costa Rica p. 267, *acuticollis*, *obtusicollis* Mexico p. 268 spp. n., BECHYNÉ Ent. Arb., München 1.

Parapophylia laeviuscula var. n. *pureipennis* Eritrea p. 2, PIC Echange Num. spéc. (Opusc. mart. XII) 1944.

Phyllotrocta valid to Chevr. 1845 not 1837 p. 86, HINCKS Ann. Mag. nat. Hist. (12) 3.

Pyrhalta viburni characters p. 153 figs., HINCKS J. Soc. Brit. Ent. 3.

Raphidopalpa valid to Chevr. 1845 not 1837 p. 88, HINCKS Ann. Mag. nat. Hist. (12) 3.

Schematiza cordiae egg, larva p. 277 figs., SIMMONDS Canad. Ent. 81.

HISPIDAE.

Hispids collected by Vogl in Venezuela, FREUDE Bol. Ent. venezol. 8 pp. 125–126.

Hispids of China, GRESSITT Lingnan Sci. J. 23 pp. 53–142, 5 pls.

Morphology of Hispids on cultivated plants, RISBEC Rev. int. Bot. appl. 30 pp. 378–396, 13 figs.

Location of some of the author's Hispid holotypes and allotypes, UHMANN Ann. Mag. nat. Hist. (12) 3 pp. 336–337.

Agonia lineaticollis sp. n. Congo p. 16, PIC Echange Num. spéc. (Opusc. mart. V) 1941.

Anoplitis trinidadica sp. n. Trinidat p. 328 fig., UHMANN Ann. Mag. nat. Hist. (12) 3.—*A. heringi* p. 6, *fryi* p. 11 early stages figs., UHMANN Ark. Zool. 42A no. 20.

Asamangulia longispina sp. n. China p. 104 fig., GRESSITT Lingnan Sci. J. 23.

Brontispa mariana early stages and adult pp. 144–147 figs., LANGE Proc. Hawaii. ent. Soc. 14.—*B. namorikia* larva, pupa pp. 167–171 fig., MAULIK Proc. Hawaii. ent. Soc. 14.—*B. yoshinoi* sp. n. Papau Is.; *chalgybeipennis* characters p. 246, BARBER J. Wash. Acad. Sci. 40.—*B. yoshinoi* adult, early stages pp. 311–319 figs., HAGEN & DOUTT Ann. ent. Soc. Amer. 43.

Callispa key to Chinese spp. p. 66; *angusta* sp. n. China p. 67 fig., GRESSITT Lingnan Sci. J. 23.

Carinispa nevermanni pupa p. 9, early stages p. 34 figs., UHMANN Ark. Zool. 42A no. 20.

Cephalodonta bimaculaticollis sp. n. Brazil p. 11, PIC Echange 64 1948.

Chalepus panici sp. n. Venezuela p. 331, UHMANN Ann. Mag. nat. Hist. (12) 3.—*C. schmidti* pupa p. 14 figs., UHMANN Ark. Zool. 42A no. 20.

Choeridiona cupreovirida sp. n. Fukien p. 77 fig., GRESSITT Lingnan Sci. J. 23.

Cryptonychus key to known spp. of subgen. *Cryptonychus* p. 17; (*G.*) *murrayi* Baly (= *reichenowi* Kolbe) p. 19; (*Gyllenhaleus*) *bipunctatus*, (*G.*) *macrorhinus* characters p. 21 figs., UHMANN Zool. Anz. 139 1942.

Dactylispa key to Chinese spp. p. 106; *cervicornis* p. 113, *kaulina* p. 118, *mauliki* p. 123, *planispina* p. 125, *tuberculata* p. 131, *uhmanni* p. 132 spp. n. China; *chinensis* Ws. (= *gestroi* Gress.) p. 115; *pungens* Boh. (= *atracumina* Gress.) p. 127 figs., GRESSITT Lingnan Sci. J. 23.

Dicladispa armigera Ol. (with *similis* Uhm. reduced to subsp.) p. 134, *semicyanea* Pic p. 135 from *Hispa*, GRESSITT t.c.—*D. admiranda* sp. n. N. Rhodesia p. 333 fig., UHMANN Ann. Mag. nat. Hist. (12) 3.

Downesia key to Chinese spp.; *balyi* p. 83, *kwangtunga* p. 84 spp. n. China, GRESSITT Lingnan Sci. J. 23.

Estigmene bicolor sp. n. India, Assam p. 133 fig., BHASIN J. zool. Soc. India 2.

Heptispa limbata pupa p. 7 fig., UHMANN Ark. Zool. 42A no. 21.

Heterispa vinula westwoodi early stages p. 22 figs., UHMANN op. cit. 42A no. 20.

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Octotoma championi early stages p. 25 figs., UHMANN op. cit. 42A no. 20.

Oncocephala incisa Madagascar, *madoni* Gabon, *ruficornis* E. Africa spp. n. p. 15, PIC Exchange Num. spéc. (Opusc. mart. V) 1941.

Oxyroplata bellicosa early stages p. 4, UHMANN Ark. Zool. 42A no. 21.

Pentispa clarkella early stages p. 33 figs., UHMANN op. cit. 42A no. 20.—*P. clarkella* pupa p. 9, UHMANN op. cit. 42A no. 21.

Platothispa fulvescens pupa p. 32 figs., UHMANN op. cit. 42A no. 20.

Prionispa sinica sp. n. Fukien p. 78, GRESSITT Lingnan Sci. J. 23.

Probaenia crenatula pupa p. 26 figs., UHMANN Ark. Zool. 42A no. 20.—*P. crenatula* early stages p. 6, UHMANN op. cit. 42A no. 21.

Sceloenopla pascoei further description; (*Ocnosispa*) *pectoralis* sp. n. Brazil p. 325 fig., UHMANN Ann. Mag. nat. Hist. (12) 3.—*S. erudita* early stages p. 1 figs., UHMANN Ark. Zool. 42A no. 20.

Uroplata sculptilis p. 17, *fulvopustulata* p. 18 early stages figs., UHMANN t.c.

Xenochalepus contubernalis larva p. 16 figs., UHMANN t.c.—*X. subomogeri* early stages p. 1 fig., UHMANN op. cit. 42A no. 21.

CASSIDIDAE.

Cassidids collected by Vogl in Venezuela, FREUDE Bol. Ent. venezol. 8 pp. 126–128.

Generic names of Cassidinae in Dejean's 1837 catalogue valid in 1837 or 1843 and additional names by Barber & Bridwell, HINCKS Ann. Mag. nat. Hist. (12) 3 pp. 506–508.

Revision of Argentine Dorynotini, MONRÓS & VIANA Acta zool. illoana 8 1949 pp. 391–426, 14 figs.

Alledoya n. n. for *Deloyala* Redt. nec Dup. & Chevr. p. 508, HINCKS Ann. Mag. nat. Hist. (12) 3.

Austropsecadia n. n. for *Psecadia* Weise nec Hb. p. 508, HINCKS t.c.

Batonota ensifera (*gregaria*), *mimica*, *spinosa* see *Paranota*.

Cassidinoma n. n. for *Oma* Spaeth nec *Omnia* Newm. p. 508, HINCKS Ann. Mag. nat. Hist. (12) 3.

Chelymorpha see *Cyphomorpha*.

Chersinella see *Chersinellina*.

Chersinellina n. n. for *Chersinella* Champ. nec Gray p. 509, HINCKS Ann. Mag. nat. Hist. (12) 3.

Coptocycla see *Thyreaspis*.

Ctenochira Chap. nec Foerst. see *Microctenochira*.—*C. aciculata* see *Euctenochira*.

Cyphomorpha Hope (= *Chelymorpha* Chevr.) p. 509, HINCKS Ann. Mag. nat. Hist. (12) 3.

Deloyala seraphina Ménét. designated type p. 508, HINCKS Ann. Mag. nat. Hist. (12) 3.—See *Aledooya*.

Dorynota monoceros Boh. (= *gladiator* Boh.) p. 411, MONRÓS & VIANA Acta zool. lilloana 8 1949.

Echoma see *Omoplata*; *flava* see *Spaethiechoma*.

Epistictia see *Epistictina*.

Epistictina n. n. for *Epistictia* Boh. nec Amyot p. 509, HINCKS Ann. Mag. nat. Hist. (12) 3.

Euctenochira gen. n. for *Ctenochira aciculata* Boh. p. 509, HINCKS Ann. Mag. nat. Hist. (12) 3.

Glima mirabilis Boh. designated type p. 511, HINCKS Ann. Mag. nat. Hist. (12) 3.—See *Proglima*.

Microctenochira Spaeth (= *Ctenochira* Chap. nec Foerst.) p. 510, HINCKS Ann. Mag. nat. Hist. (12) 3.

Oma denticulata Boh. designated type p. 508, HINCKS Ann. Mag. nat. Hist. (12) 3.—See *Cassidinoma*.

Omoplata Hope (= *Echoma* Dup. & Chevr.) p. 510, HINCKS Ann. Mag. nat. Hist. (12) 3.

Paranota gen. n. for *Batonota ensifera* Boh. (= *gregaria* Boh.) (type), *B. minima* Wag., *B. spinosa* Boh. p. 396 figs., MONRÓS & VIANA Acta zool. lilloana 8 1949.

Proglima n. n. for *Glima* Spaeth nec *Glymma* Mars. p. 511, HINCKS Ann. Mag. nat. Hist. (12) 3.

Psecadia see *Austropsecadia*.

Spaethiechoma n. n. for *Echoma flava* L. p. 511, HINCKS Ann. Mag. nat. Hist. (12) 3.

Stolas Billb. status discussed p. 508, HINCKS t.c.

Strongylaspis see *Strongylocassis*.

Strongylocassis n. n. for *Strongylaspis* Spaeth nec Thoms. p. 511, HINCKS t.c.

Thyreaspis Hope (= *Coptocycla* Dup. & Chevr.) p. 511, HINCKS Ann. Mag. nat. Hist. (12) 3.

Trigonaspis see *Trigonocassis*.

Trigonocassis n. n. for *Trigonaspis* Spaeth nec Htg. p. 512, HINCKS Ann. Mag. nat. Hist. (12) 3.

HYMENOPTERA.

List of Hymenoptera of Rheidter Wertchen, near Cologne, AERTS Decheniana 104 pp. 36–55, 1 map.

Hymenoptera (excl. Apidae) of nature reserve park, Lüneburg Heath, ALFKEN Abh. naturw. Ver. Bremen 32 1942 pp. 222–232.

Tropical wasps in Trinidad, CAL-LAN Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 204–206.

Catalogue of Aculeata in northern France and neighbouring regions, CAVRO Bull. Soc. ent. Nord France Suppl. no. 52, 84 [+] 2 pp.

Hymenoptera Aculeata of Cyprus, II, HAMMER Comment. biol., Helsingfors 10 no. 13, 17 pp. 12 figs.

Aculeata of Poland, NIESIOŁOWSKI Polsk. Pismo ent. 19 pp. 221–228.

Hymenoptera Aculeata of Cyprus, I, PITTONI Comment. biol., Helsingfors 10 1950 no. 12, 94 pp. 23 figs.

Aculeata from Pembrokeshire, RICHARDS Ent. mon. Mag. 86 pp. 79–80.

Aculeata of the National Park of Great Poland, SZULCZEWSKI Prace Monogr. Przysr. Wielk. Parku Narod. Poznań 2 no. 4, 20 pp.

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APIDAE (s.l.).

Apids of Dakar, BENOIST Bull. Inst. franç. Afr. noire 12 p. 629.

Some bees from Mauretania, BENOIST Bull. Inst. franç. Afr. noire 12 pp. 941–943.

Apidae of Air, Fr. Sudan, BENOIST Mém. Inst. franç. Afr. noire no. 10 pp. 306–313.

Some wild bees of Utah, BOHART, KNOWLTON & BOHART Mimeogr. Ser. Utah agric. Exp. Sta. no. 371, 10 pp.

Megachilidae of Br. Columbia, BUCKELL Proc. ent. Soc. B.C. 46 pp. 21–31, 1 map.

List of Megachilidae of Iowa, JAQUES Proc. Iowa Acad. Sci. 55 1948 pp. 389–390.

Colletids, Halictids, Megachilids and Apids of Micronesia, KROMBEIN Proc. Hawaii. ent. Soc. 14 pp. 101–142, 41 figs.

Some Bolivian Meliponinae, MOURE
Dusenia 1 pp. 70-80.

Systematic notes on Centr. Asiatic
genn. of Anthidiinae, POPOV C.R.
Acad. Sci. URSS (N.S.) 70 pp. 315-
318, 1 fig.

Key to and distribution of Mexican
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Biol. Mexico 20 pp. 357-370, 1 fig.

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Anthidium Latr. (= *Proanthidium*
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Anthophora alternans var. n. *mauri-*
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Bull. Inst. franç. Afr. noire 12.

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Bombus Latr. 1802 (type *terrestris*
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Eoanthidium subgen. n. (type
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Epeolus berlandi sp. n. Mauretania
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Afr. noire 12.

Eucera wahrmani sp. n. Palestine
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Zool. Bot. afr. 43.

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Hylaeus yapensis Yasum., *rotensis* Yasum. from *Prosopis*; *hirticaudus* ♀ p. 107 figs., KROMBEIN Proc. Hawaii. ent. Soc. 14.

Lasioglossum pseudocaspicum p. 57, *hellenicum* p. 58 ♂♂ figs., PITTONI Comment. biol., Helsingfors 10 no. 12.

Lithurgus (*L.*) *scabrosus* Sm. (= *guamensis* Ckll.) p. 120, KROMBEIN Proc. Hawaii. ent. Soc. 14.

Megachile Latr. 1802 type *centuncularis* L. valid placed on Official List, Bull. zool. Nomen. 4 p. 413.—*M. pauliani* sp. n. Europa I. p. 103 figs., BENOIST Mém. Inst. sci. Madagascar 4A.—*M. remeata* ♂ & new organ on 5th abdominal sternite p. 167, RAYMENT Vict. Nat. 66.

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Sphecids of the Sagan-Omo Expedition, GUIGLIA Ann. Mus. Stor. nat. Genova 64 pp. 231–260.

Oriental and Australian Crabronids placed in *Crabro* by Turner (1912–15), LECLERCQ Bull. Ann. Soc. ent. Belg. 86 pp. 191–198.

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Vespidae of the Tisza-Danube plain, Hungary, TAUBERT Folia ent. hung. 8 1943 pp. 45-46.

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Distribution of and keys to Chrysidiidae of Netherlands, BENNO Publ. natuurh. Genootsch. Limburg 3 pp. 9-48, 5 figs.

Chrysidiidae of Cyprus, ENSLIN Ann. Mag. nat. Hist. (12) 3 pp. 656-671, 4 figs.

Chrysidiidae of Parc nat. Albert, Belg. Congo, ZIMMERMANN Explor. Parc nat. Albert, Miss. de Witte fasc. 70 pp. 27-28.

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Holopyga viridis Guér. (=var. *cypria* Trautm.) a var. of *fervida* F. not *gloriosa* p. 658, ENSLIN t.c.

Spintharina Sem. raised to genus p. 319, ZIMMERMANN Ann. naturh. Mus. Wien 57.

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Critical remarks on Creighton's "The ants of North America", BORGMEIER Rev. Ent., Rio de J. 21 pp. 381–386.

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Revision of the Dacetini, II, V, BROWN Trans. Amer. ent. Soc. 76 pp. 27–36, 2 figs., 143–145.

Wing venation and phylogeny of Formicidae, BROWN & NUTTING Trans. Amer. ent. Soc. 75 pp. 113–132, 2 pls.

Ants of N. America, CREIGHTON Bull. Mus. comp. Zool. Harv. 104 pp. 1–585, 57 pls.

Ross collection of ants from New Guinea, VIII, DONISTHORPE Ann. Mag. nat. Hist. (12) 3 pp. 338–341.

Ants of Turkey, DONISTHORPE Ann. Mag. nat. Hist. (12) 3 pp. 1057–1067.

Ants of Fernando Po and Rio Muni (Spanish Guinea), MENOZZI Zool. Anz. 140 1942 pp. 164–182, 4 figs.

Ants in N. Narvik, O'Rourke Norsk ent. Tidsskr. 8 pp. 47–50.

Irish Formicidae, O'Rourke Proc. R. Irish Acad. 52 Sect. B pp. 383–410.

Formicids of E. Pyrenees, OVAZZA Vie et Milieu 1 pp. 93–94.

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Ants of Nagy Pietrossz and district, Hungary, RÖSZLER Zool. Anz. 145 pp. 210–225.

Formicids collected by Stärcke in Lusitania, SCHMITZ Brotéria (Ci. nat.) 46 pp. 12–16.

Keys to genn. & spp. of British Formicids, SWEENEY Ent. Gaz. 1 pp. 64–86, 31 figs.

Ants from Saipan, Marianas Is., WEBER Ent. News 61 pp. 99–102.

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Phrynoponera gabonensis André (=var. *striatidens* Santschi, *robustior* S., *esta* Wh., *fecunda* Wh., *umbrosa* Wh.) p. 246, BROWN t.c.

Phyracaces eidmanni sp. n. Fernando Po p. 165 figs., MENOZZI Zool. Anz. 140 1942.

Pogonomyrmex revision of Patagonian spp. of subgen. *Ephebomyrmex* pp. 291–307, list of spp. p. 293; *odoratus* sp. n. Patagonia p. 298, KUSNEZOV Acta zool. lilloana 8 1949.

Polyhomoa gen. n. (Dacetini), *itoi* sp. n. Japan in pp. 34–37, AZUMA Hyogo Biology 1 no. 4 (pub. 10.1.50) [not seen].—*P.* see *Kyidris*.

Polyrhachis (*Myrma*) *iperpunctata* sp. n. Fernando Po p. 181 figs., MENOZZI Zool. Anz. 140 1942.

Pseudolasius list of Centr. African spp.; *myersi* subsp. n. *occipitalis* Uganda p. 2 figs., WEBER & ANDERSON Amer. Mus. Novit. no. 1443.

Simopelta pergandei ♀ p. 374, early stages p. 376; *bicolor* sp. n. Brazil p. 377 figs., BORGMEIER Rev. Ent., Rio de J. 21.

Smithistruma (*S.*) *filirrhina* p. 37, (*S.*) *wrayi* p. 38, (*S.*) *filitalpa* p. 39, (*S.*) *californica* p. 40, (*S.*) *bunki* p. 41 spp. n. U.S.A.; key to workers of known Ethiopian spp.; (*S.*) *cavinasis* Belg. Congo p. 42, (*S.*) *truncatidens*

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Teleutomyrmex gen. n., schneideri sp. n. Switzerland p. 82 figs., KUTTER Mitt. schweiz. ent. Ges. 23.

Terataner piceus sp. n. Spanish Guinea p. 173 figs., MENOZZI Zool. Anz. 140 1942.

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Veromessor andrei castaneus Wh. & Cr. (=subsp. *flavus* Wh. & Cr.) p. 159, CREIGHTON Bull. Mus. comp. Zool. Harv. 104.

Viticicola tessmanni Stitz (=var. *castanea* Wh.) p. 248, BROWN Wasmann J. Biol. 8.

Xenomyrmex stolli floridanus Em. (=subsp. *rufescens* Wh.) p. 226, CREIGHTON Bull. Mus. comp. Zool. Harv. 104.

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PROCTOTRUPIDAE (SERPHIDAE).

Proctotrupoids of Africa and Fr. Colonies, RISBEC Trav. Lab. Ent. Sect. Soudan. Rech. agron. 2 pp. 511-638, 92 figs.

Cryptoserphus arcuator sp. n. Ireland p. 315 figs., STELFOX Ent. mon. Mag. 86.

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Chalcidoidea.

List of recent generic and sub-generic synonyms in Chalcidoidea, DE SANTIS Rev. Mus. La Plata 6 (Zool.) no. 37 pp. 47-67.

TORYMIDAE (CALLIMOMIDAE).

Megastigmus albizziae sp. n. India p. 130 figs., MUKERJI Proc. R. ent. Soc. Lond. (B) 19.

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CHALCIDIDAE.

Characters and scope of Cratocephalini, STEFFAN Bull. Mus. Hist. nat. Paris (2) 22 p. 596.

Acanthochalcis characters; *gigas* sp. n. Madagascar p. 597 figs., STEFFAN Bull. Mus. Hist. nat., Paris (2) 22.

Brachymeria agonoxenae sp. n. Samoa p. 63, FULLAWAY Proc. Hawaii. ent. Soc. 14.

Macrochalcis carinata sp. n. Tonkin p. 599 figs., STEFFAN Bull. Mus. Hist. nat., Paris (2) 22.

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EUCHARIDAE.

Revision of Japanese Eucharidae, WATANABE Trans. Shikoku ent. Soc. 1 pp. 59-64, 2 figs.

Eucharis esakii Ishii (= *scutellaris* Gah.) p. 59, WATANABE Trans. Shikoku ent. Soc. 1.

Schizaspidia nekkensis see *Stibula cyniformis tenuicornis*.

Stibula cyniformistenuicornis Ashm. (= *Schizaspidia nekkensis* Ishii) p. 61, WATANABE Trans. Shikoku ent. Soc. 1.

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**ENCYRTIDAE (including
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List of Antheminae, GHEQUIÈRE Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 133–135.

Anagyrus antoninae early stages p. 20 fig., RIHERD Florida Ent. 33.

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Aphelinus pictus see *Marietta picta*.

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Copidosoma oeceticola sp. n. Argentina p. 21 figs., DE SANTIS Notas Mus. La Plata 15 (Zool.) no. 132.

Copidosomopsis Gir. valid, not synonym of *Copidosoma*, scope p. 176, GHEQUIÈRE Bull. Ann. Soc. ent. Belg. 86.

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Marietta picta André (= *Coccophagus pantherinus* Giraud, *Aphelinus pictus* D.T., *Perissopterus zebra* Merc., *P. zebratus* Merc., *M. zebrata* Merc., *P. pictus* Novit.) p. 40, GHEQUIÈRE Rev. franç. Ent. 17.

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Signiphorina gen. n., *mala* sp. n. (type) Crimea, Caucasus, Centr. Asia; *elongata* Gir. from *Signiphora* pp. 320, 321 figs., NIKOL'SKAYA C.R. Acad. Sci. URSS (N.S.) 75.

Tropidophryne melvillei ♂ p. 165 figs., DOUTT & SMITH Canad. Ent. 82.

Xana kurdjumovi n. n. for *nigra* Kurdj. nec Ashm. p. 321, NIKOL'SKAYA C.R. Acad. Sci. URSS (N.S.) 75.

PTEROMALIDAE.

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Eurydinoteloides ogloblini sp. n. Argentina p. 135 figs., BLANCHARD Rev. Invest. agric., B. Aires 4.

Hemitrichus Thoms. (= *Uriella Ashm.*) *rufipes* Thoms. (= *U. rufipes* Ashm.) distribution p. 97, GAHAN & WALLACE Ent. News 61.

Stictomischus phytomyzae sp. n. France p. 566 fig., GHEQUIÈRE Bull. Mus. Hist. nat., Paris (2) 21.

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Bridarolliella gen. n. p. 278, *bifasciata* sp. n. Argentina p. 279 fig., DE SANTIS Notas Mus. La Plata 14 (Zool.) 1949 no. 127.

Derostenus arcticus sp. n. Arctic Russia p. 55 fig., ERDÖS Folia ent. hung. (N.S.) 3.

Euderus carpomyiae sp. n. India p. 135 figs., BHATNAGAR J. zool. Soc. India 2.

Melittobia Westw. (= *Sphecophagus* Brèthes) p. 276; *sceliphronidis* reduced to subsp. or var. of *hawaiiensis* Perk. p. 277, DE SANTIS Notas Mus. La Plata 14 (Zool.) 1949 no. 127.

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Tetrastichus coccinellae early stages p. 5 figs., RANAWERA Indian J. Ent. 9.—*T. versicolor* p. 7, *taprobanensis* p. 10, *niger* p. 12 spp. n. Ceylon figs., RANAWERA Indian J. Ent. 9.—*T. abalosi* p. 45, *grassoii* p. 47, *grioti* p. 50 spp. n. Argentina figs., BLANCHARD An. Inst. Med. reg., Tucuman 3.—*T. carbonelli* sp. n. Argentina p. 9 fig., BLANCHARD Comun. zool. Mus. Hist. nat. Montevideo 2 1947 no. 42.

MYMARIDAE.

Notes on some British Mymarids, HINCKS Trans. Soc. Brit. Ent. 10 pp. 167–207, 5 figs.

Revision of European Mymaridae with genera up to circa 1930 (key p. 29), KRYGER Ent. Medd. 26 pp. 1–96, 44 figs.

Alaptus aegyptiacus p. 121, *priesneri* p. 122 spp. n. Egypt, SOYKA Bull. Soc. Fouad Ier Ent. 34.

Anagrus aegyptiacus p. 123,
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Anaphes elongatus sp. n. Ivory
Coast p. 623 figs., RISBEC Trav.
Lab. Ent. Sect. Soudan. Rech.
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Maidliella aegyptiaca sp. n. Egypt
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Novickyella dakhlae sp. n. Egypt
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Notas Mus. La Plata 14 (Zool.) 1949
no. 129.

Stephanodes similis Foerst. from
Polynema p. 176, HINCKS Trans. Soc.
Brit. Ent. 10.

Cynipoidea.

CYNIPIDAE.

Revision of Cynipids of Iceland,
JANSSON Ent. Medd. 25 pp. 425–428.

Charipidae of Japan, WATANABE
Insecta matsum. 17 pp. 85–89, 2 figs.

Charips simplex p. 86, *ishizawai*
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Eucoila haywardi sp. n. Argentina
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Mus. Hist. nat. Montevideo 2 1947
no. 42.

Kleidotoma japonica sp. n. Japan
p. 460, larva p. 463, pupa p. 473
figs., HUZIMATU Sci. Rep. Tōhoku
Univ. (4) Biol. 15 1940.

Ichneumonoidea.

TRIGONALIDAE.

Trigonalids of Belg. Congo, BENOIT
Rev. Zool. Bot. afr. 43 pp. 216–221.

Lycogastroides maynei p. 217,
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BENOIT Rev. Zool. Bot. afr. 43.

Lycogastrula Strand valid gen.,
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Tapinogonalo *ornatissima* sp. n.
Belg. Congo p. 220, BENOIT t.c.

ICHNEUMONIDAE.

Ichneumonidae of Georgia, FATTIG
Emory Univ. Mus. Bull. no. 9, 78 pp.

Ichneumonids of Aïr, Fr. Sudan,
GRANGER Mém. Inst. franç. Afr.
noire no. 10 p. 284.

List of Ichneumonids of Würzburg
district, HEDWIG Nachr. Sammelst.
Schmarotzerbestimm. no. 29 pp.
43–56.

Ichneumonids of Iceland, HELLÉN
Ent. Medd. 25 pp. 414–418.

Systematic notes on Wolstedt's
Ichneumonid types, HELLÉN Notul.
ent., Helsinki 30 pp. 26–31.

Gravenhorst's work on Ichneu-
monids in 1820, KERRICH Ent. mon.
Mag. 86 pp. 323–324.

Additions to list of Ichneumonids
and their hosts of Saxony, STARKE
Isis Budissina 14 1940 pp. 64–91.

Revision of American Tryphonini, pt. II, TOWNES H. K. & M. C. Ann. ent. Soc. Amer. **42** pp. 397-447, 5 pls.

Acroricnus re-defined p. 249, revision of American spp. p. 249-261, key p. 251; *stylator* subssp. n. *niger* (also Canada) p. 253, *townesi* p. 256, *axilaris* p. 259 U.S.A.; *excelsus* Cress. p. 255, *junceus* Cress. p. 257, *aequatus* Say p. 258, *edwardsii* Cress. p. 259 reduced to subssp. of *stylator*; *tricolor* sp. n. Haiti, Porto Rico, San Domingo p. 260 figs., MITCHELL Ann. ent. Soc. Amer. **43**.

Agrypion revision of European spp. of subgenn. *Barylypa*, *Labrorhynchus* and *Agrypion* pp. 31-38, key p. 32; (*B.*) *rossicum* Russia p. 34, (*L.*) *flaviventris* Siberia p. 36, (*A.*) *brachycerus* Finland p. 38 spp. n., HELLÉN Notul. ent., Helsinki **30**.

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Coelichneumon bodmanorum sp. n. Germany p. 18, HEINRICH Nachr. Sammelst. Schmarotzerbestim. Aschaffenburg Heft 28.

Coleoconus see *Monoblastus*.

Cosmoconus canadensis subsp. n. *vallis* U.S.A., Canada p. 425, TOWNES H. K. & M. C. Ann. ent. Soc. Amer. **42**.

Cryptus suzukii early stages p. 38 figs., IWATA Trans. Kansai ent. Soc. **15**.

Diplazon fissorius larva p. 157 figs., SCHNEIDER Mitt. schweiz. ent. Ges. **23**.

Dyspetes see *Horogenes*.

Dyspetus fracticeps n. n. for *praerogator* auct. nec L.; *rufus* Prov. from *Exetastes* p. 422, TOWNES H. K. & M. C. Ann. ent. Soc. Amer. **42**.

Exephanes calamagrostis sp. n. Germany p. 15, HEINRICH Nachr. Sammelst. Schmarotzerbestim. Aschaffenburg Heft 28.

Exeristes albicincta early stages p. 45 figs., IWATA Trans. Kansai ent. Soc. **15**.

Exetastes rufus see *Dyspetus*.

Hemiteles difficilis sp. n. Macedonia p. 18, HEDWIG Nachr. Sammelst. Schmarotzerbestimm. no. 29.

Horogenes Foerst. (= *Dyspetes* Foerst.) p. 422, TOWNES H. K. & M. C. Ann. ent. Soc. Amer. **42**.

Ichneumon suspiciosus (mis cited as *Alomya debellator*) larva, pupa p. 433 (1950), p. 637 (1951) fig., CAMERON Bull. ent. Res. **41**.—*I. apricus* see *Platylabops*.

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Zaraea metallica Mocs. ♂ (=lewi) var. *matsumurai* Tak.) pp. 92, 208; *zelochovtzevi* n. n. for *metallica* Zhel. nec Mocs. pp. 93, 209; *kozhevnikovi* Zhel. (=semenovi Kuzn.-Ug.) pp. 96, 209; *hungarica* Mocs. a valid sp. not syn. of *mutica* Thoms. pp. 99, 210 figs., GUSSAKOVSKI^I Fn. URSS Hym. 2 (2) 1947.

LEPIDOPTERA.

Status of intermediate terms of Hübner "Samml. exot. Schmett." Vol. 1, Bull. zool. Nomen. 4 pp. 289-290.

Notes on the Lepidoptera of Poland II, ADAMCZEWSKI Fragm. faun. Mus. zool. polon. 6 pp. 95-110.

Determining Lepidoptera pupae by genitalia, AGENJO Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 530–534, 1 fig.

Lepidoptera of Podgórski, Poland, BŁĘZYSKI Docum. physiogr. polon. no. 21, 52 pp.

Macrolepidoptera of Sintra region, Portugal, CARNEIRO-MENDES Bull. Soc. portug. Ciênc. nat. **18** pp. 47–65.

Lepidoptera of the valley of the Durance, France, CLEU Mém. Mus. Hist. nat., Paris (N.S.) **20** 1947 pp. 141–188.

Lepidoptera of Brazil, pt. 2, DA COSTA LIMA Ins. Brasil tome 6, 420 pp. 332 figs.

Macrolepidoptera and Pyrales of Dover and Deal district of Kent, EMBRY & YOUTDEN Butterfl. & Moths Dover. . . 1949 ix & 61 pp.

Additions to list of Macrolepidoptera of Kaiserstuhl, S. Germany, GREMMINGER Z. Lepid. **1** pp. 49–52.

Lepidoptera of Utsjoki, Finland, HACKMAN Notul. ent., Helsinki **30** pp. 18–22, 1 fig.

Lepidoptera of Västerbotten, N. Sweden, HEQVIST Ent. Tidskr. **71** pp. 33–42, 2 figs.

List of Macrolepidoptera of Abtenau, Salzburg, HOFFMANN Z. wien. ent. Ges. **35** pp. 25–33, 1 fig.

Problems in Danish Macrolepidoptera, HOFFMEYER Entomologist **83** pp. 193–198.

Lepidoptera of Pribilof Is., Alaska, JOHNSTON Lep. News **4** pp. 27–30.

List of Lepidoptera of New Orleans area, JUNG Proc. Louisiana Acad. Sci. **13** pp. 42–48.

Macrolepidoptera of N.E. Bohemia, KOMÁREK Acta Soc. ent. Čsl. **47** pp. 41–45, 1 fig.

Macrolepidoptera of Cracow & neighbourhood, LEWACKI Polsk. Pismo ent. **19** pp. 324–326.

Lepidoptera of Lubasz, S. Poland, NIESIÖŁOWSKI & WOJTUSIAK Polsk. Pismo ent. **19** pp. 256–276, 1 fig.

Macrolepidoptera from Centr. Norway, OPHEIM Norsk ent. Tidsskr. **8** pp. 91–123, 9 figs.

Aberrant Lepidoptera from Kaposcár, Hungary, PAZSICZKY Folia ent. hung. **7** 1942 pp. 65–72, 3 pls. 4 figs.

Southern spp. of Lepidoptera found in the Geneva district, REHFROUS Mitt. schweiz. ent. Ges. **23** pp. 417–431.

Key to Lepidopterous larvae feeding on cultivated plants, RISBÉC C.R. 1er Conf. int. Africanistes Ouest **1** pp. 307–316.

New classification for Lepidoptera, SCHILDER Biol. Zbl. **69** pp. 63–71.

Lepidoptera of Portugal and Spain, DA SILVA CRUZ & GONÇALVES Broteria (Ci. nat.) **46** pp. 17–45, 49–56.

Macrolep. from Jakobstad, Finland, 1932–48, SJÖHOLM Notul. ent. **29** pp. 64–79, 1 map.

Lepidoptera from Moravia and Silesia, SKALA Arb. ent. Abt. Landesmus. Brünn no. 3 1936 [1+] 197 pp. 1 map, 1 fig.

Butterflies and moths of Montgomeryshire, SMITH Proc. Chester Soc. nat. Sci. **3** pp. 5–68, 8 pls.

Injurious, or possible injurious, Lepidoptera of Tunisia, SOURES Ann. Serv. bot. agron. Tunisie **21** (1948) [?1950] pp. 1–211 [+] 44 pls. 2 figs.

Lepidoptera of Sweden, II, SVENSON Ent. Tidskr. **71** pp. 46–54.

Some Lepidoptera collected in N. Germany, 1939, SZENT-IVÁNY Folia ent. hung. **7** 1942 pp. 84–95.

Lepidoptera collected in Tisza-derzs, Hungary, SZENT-IVÁNY Folia ent. hung. **7** 1942 pp. 109–112.

Additions to Macrolepidoptera of S. Bavaria, WOLFSBERGER Mitt. münchen. ent. Ges. **40** pp. 207–236.

Rhopalocera.

Discussion on validity of Rhopalocera of Denis & Schiffermüller in "Syst. Verz.," BERNARDI Bull. Soc. ent. Mulhouse **1950** pp. 61–63.

Rhopalocera described by Geoffroy 1785, Hist. Ins. Paris, BERNARDI Rev. franç. Lép. **12** pp. 278–281.

List of Butterflies from N. Assam, BETTS J. Bombay nat. Hist. Soc. **49** pp. 488–502, 1 map.

Butterflies of Champaran, N. Bihar, HARMAN J. Bombay nat. Hist. Soc. **49** pp. 93–100.

Rhopalocera of the Outer Hebrides, HARRISON Ent. mon. Mag. **86** pp. 65–70.

Butterflies of Ophir, HISLOP Malayan Nature J. **5** pp. 9–16, 1 pl.

Butterflies of Sind, MENESSE J. Bombay nat. Hist. Soc. **49** pp. 20–24.

Systematic notes on some Rhopalocera, with new tribes, ORFILA Acta zool. lilloana **8** 1949 pp. 583–586.

List of Rhopalocera families, ORFILA Rev. Soc. ent. argent. **14** pp. 263–269.

List of described immature stages of Indian Rhopalocera, PANT & CHATTERJEE Indian For. Rec. (N.S.) Ent. **7** pp. 213–255.

Rare butterflies of Poland and neighbouring countries, PATRYN Polsk. Pismo ent. **19** pp. 327–330.

Illustrations of Lepidoptera eggs, SARLET Lambillionea **50** pp. 29–33.

Rhopalocera from It. Somaliland, STORACE Ann. Mus. Stor. nat. Genova **64** 1949 pp. 12–29.

Notes on some Italian butterflies, STORACE Boll. Soc. ent. ital. **80** pp. 15–16.

Butterflies of southern Africa VAN SON Transv. Mus. Mem. no. 3 1949 vi & 237 pp. 41 pls. 132 figs.

Rhopalocera of French Oceania, VIETTE Fn. Emp. franç. **13** pp. 1–101, 126 figs.

Butterflies of the northern and central Sudan, WILSON Sudan Notes **30** pp. 222–244, 8 pls. 1 fig. (Mem. Res. Div. Minist. Agric. Sudan no. 12).

DANAIDAE.

Corrections to the types of genera of Mechanitidae, FERREIRA D'ALMEIDA Rev. Ent., Rio de J. **21** p. 224.

Athesis clearista colombiensis Kaye (=subsp. *bassleri* Fox) p. 393, FERREIRA D'ALMEIDA An. Inst. Biol. Mexico **20**.

Danais plexippus L. placed on Official List of specific Trivial Names, Bull. zool. Nomen. **4** p. 361.

Danaus Kluk 1802 (type *plexippus* L.) placed on Official List, Bull. zool. Nomen. **4** p. 494.—*D. p. plexippus* L. (=*megalippe* Hb., *nigrippers* Haensch) the subsp. occurring in northern S. America and Centr. America pp. 234–236, FIELD Proc. ent. Soc. Wash. **52**.—*D. chrysippus dorippus* ab. n. *evanescens* It. Somaliland p. 20, STORACE Ann. Mus. Stor. nat. Genova **64** 1949.

Dircenna acreana sp. n. Brazil p. 395 fig., FERREIRA D'ALMEIDA An. Inst. Biol. Mexico **20**.

Euploea F. 1807 type *corus* F., placed on Official List, Bull. zool. Nomen. **4** p. 457.

Hypothryris fenella Hew. (=ab. *ferreirae* Duf.) p. 395, FERREIRA D'ALMEIDA An. Inst. Biol. Mexico **20**.

Mechanitis F. 1807, type *polymnia* L., placed on Official List, Bull. zool. Nomen. **4** p. 457.—*M. elisa* subsp. n. *acreana* Brazil p. 394 figs., FERREIRA D'ALMEIDA An. Inst. Biol. Mexico **20**.

SATYRIDAE.

Eggs of Satyridae, SARLET Lambillionea **50** p. 60, 1 pl.

Aulocera Btlr. 1867 (type *brahminus* Blanch.) placed on Official List, Bull. zool. Nomen. **4** p. 494.

Calisto revision pp. 212–233, key to spp. & ff. p. 215; *montana* Clench a sp. not var. of *hysius* p. 221; *debarriera* C. a sp. not var. of *confusa* p. 222; *smintheus* Bates (=*delos* B.) p. 226; s. subsp. n. *bradleyi* Cuba p. 227, MUNROE J.N.Y. ent. Soc. **58**.

Coenonympha pamphilus British abb. pp. 108–120 figs., LEEDS Trans. S. Lond. ent. nat. Hist. Soc. **1948–49** (postscript **1949–50** 1951 p. 81).—*C. tullia* subsp. n. *muonioënsis* Finland p. 81 figs., LINGONBLAD Notul. ent. **29**.

Erebia tyndarus rondoui, *cassioides* *murina* discussed p. 225; *dromulus* subsp. *graucasica* Jach. (=*hippocoon* Nies.); *callias* subsp. *sheljuzhkoii* Warr. (=*dromulus* Nies. nec Stg.) p. 227; *cassioides* subsp. n. *transcaucasica* W. Armenia, Caucasus etc. p. 229, WARREN Entomologist **83**.—*E. arete* abb. n. *caeca*, *semipupillata*, *de-fasciata* p. 30, *subtripicta* p. 31 Austria, HOFFMANN Wien. ent. Rdsch.

2.—*E. tyndarus* var. n. *buronica* p. 12; *epiphron* var. n. *valdeonica* p. 13 Spain, HOSPITAL Trab. Mus. Cienc. nat. Barcelona (N.S. Zool.) 1 1948 no. 2.—*E. ligea* subsp. n. *petsamoënsis* Finland p. 80 figs., LINGONBLAD Notul. ent. 29.—*E. epistygne* var. n. *aspera* Fr. Alps p. 15, *ribasi*, *fuliginosa* Spain p. 16, MARTEN Trab. Mus. Cienc. nat. Barcelona (N.S. Zool.) 1 1948 no. 2.—*E. medusa* Czech forms pp. 48–52, subsp. *brigobanna* ab. n. *paradoxa* Slovakia p. 51, SLABÝ Acta Soc. ent. Čsl. 47.

Manerebia monops sp. n. Argentina p. 156, HAYWARD Acta zool. lilloana 8 1949.

Maniola tithonus, *jurtina* British abb. pp. 88–108 figs., LEEDS Trans. S. Lond. ent. nat. Hist. Soc. 1948–49 (postscript 1949–50 1951 p. 81).—*M. jurtina* ab. n. *frohawkii* England p. 87, BLACKIE Entomologist 83.—*M. yacantoensis* re-description p. 153 fig., HAYWARD Acta zool. lilloana 8 1949.

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Pararge achine r. *saltator* Geoffr. (=mendolensis Dann., latealbata Vrty.) p. 279, BERNARDI Rev. franç. Lép. 12.—*P. aegeria* var. *egerides* ab. n. *rozsaei* Hungary p. 69 figs., BEZSILLA Folia ent. hung. 8 1943.—*P. aegeria* var. *egerides* f. n. *conjuncta*; *megeira* ab. n. *depuncta* Poland p. 240, SCHNAIDER Polsk. Pismo ent. 19.

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BRASSOLIDAE.

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NYMPHALIDAE.

Generic revision of Limenitini of the World, CHERMOCK Amer. Midl. Nat. 43 pp. 513–569, 68 figs.

Eggs of Nymphalidae, SARLET Lambillionea 50 p. 60, 1 pl.

Nymphalids of Air, Fr. Sudan, VILLIERS Mém. Inst. franç. Afr. noire no. 10 p. 268.

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Actinote Hb. [1819] previous type selections rejected and *thalia* L. designated type, placed on Official List, Bull. zool. Nomen. 4 p. 394.—*A. erinome* f. n. *postaperta* locality unknown p. 43 fig., BRYK Z. Lepid. 1.

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Doleschallia bisaltide subsp. n. *denisi* New Caledonia, Loyalty Is. p. 89 figs., VIETTE Fn. Emp. franç. 13.

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Euphydryas Scudd. 1872 (type *phaeton* Dru.) placed on Official List, Bull. zool. Nomen. 4 p. 494.—E. descriptive catalogue of Palaearctic spp. pp. 435-499, check list pp. 483-486; *iduna* mod. n. *sajana* Norway, Sweden, Finland p. 445; *desfontainii* mod. n. *zapateri* Spain p. 482; *cynthia* p. 453, *aurinia* p. 472 lists of named subspp. etc.; *a. siberica* mod. n. *tjutjujensis* Ussuri p. 466 figs., HIGGINS Trans. R. ent. Soc. London 101.

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Euxanthe notes on distribution and systematics p. 1, STORACE Doriana 1 no. 2.

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Epameria jacksoni sp. n. Kenya p. 139 figs., STEMPFFER Rev. franç. Ent. **17**.

Eresinopsides bichroma subsp. n. *jefferyi* Kenya p. 135, STEMPFFER t.c.

Euchrysops mauensis subsp. n. *abyssiniae* Abyssinia p. 1, STORACE Doriana **1** no. 7.

Hemiolaus ceres Hew. status discussed p. 136 figs., STEMPFFER Rev. franç. Ent. **17**.

Ipidecla euprepes sp. n. Argentina p. 579 fig., HAYWARD Acta zool. lilloana **8** 1949.

Itylos oreopola sp. n. Argentina p. 580 fig., HAYWARD t.c.

Latiorina Tutt 1909 rejected, Bull. zool. Nomen. **4** p. 484.

Lepidochrysops neonegus p. 146 (with subsp. n. *elgonae* Kenya), *variegata* p. 147 further descriptions figs., STEMPFFER Rev. franç. Ent. **17**.

Lycaeides Hb. [1819] *argyrogномон* Bergstr. designated type, placed on Official List, Bull. zool. Nomen. **4** pp. 479, 484.

Lycaena dispar carueli figured p. 38, RÉMONT Lambillionea **50**. —*L. aegon* see *Zizina otis*.

Lycaenopsis huegelii early stages p. 569, NORMAN J. Bombay nat. Hist. Soc. **49**.

Lysandra hispana rr. discussed pp. 22–28, DUJARDIN Lambillionea **50**. —*L. coridon* and abbs. pp. 39–43, LINZEE Rep. Eton Coll. nat. Hist. Soc. **10**.

Maculinea alcon r. n. *hospitali* p. 6; *arcas* r. n. *ajenjoi* p. 8 Spain, VILARRÚBIA Trab. Mus. Cienc. nat. Barcelona (N.S. Zool.) **1** 1948 no. 2.

Mimacraea krausei subsp. n. *karschioides* S. Sudan p. 106, CARPENTER & JACKSON Proc. R. ent. Soc. Lond. (B) **19**.

Mitoura gryneus Hb. (=damon Cram. nec S. & D.) p. 70; *hesseli* sp. n. New Jersey p. 74 figs., RAWSON & ZIEGLER J.N.Y. ent. Soc. **58**.

Neuryplexina kalinzu sp. n. Uganda p. 143 figs., STEMPFFER Rev. franç. Ent. **17**.

Oboronia liberiæna sp. n. Liberia p. 405 figs., STEMPFFER Bull. Inst. franç. Afr. noire **12**.

Philotes vicrama the only Czech sp.; *panoptes*, *baton*, *abencerragus*, *vicrama* male genitalia pp. 45–47 figs., PAAL'T & ŠMELHAUS Acta Soc. ent. Čsl. **47**.

Plebejus Kluk 1802 (type *argus* L. (see also p. 479)) placed on Official List, Bull. zool. Nomen. **4** p. 495. —*P. argus* subsp. n. *gailliardi* France p. 232, BEURET Rev. franç. Lép. **12**.

Polyommatus Latr. 1804, *icarus* Rott. designated type, placed on Official List, Bull. zool. Nomen. **4** p. 484.

Strymon buchholzi sp. n. Mexico, Texas p. 12, FREEMAN Field & Lab. **18**.

Stugeta bowkeri forms pp. 137–138 figs., STEMPFFER Rev. franç. Ent. **17**.

Thecla amethystina p. 567, *cana* p. 571, *eumorpha* p. 572, *eremica* p. 574, *diaguita* p. 576 spp. n.; *ellida* subsp. n. *toba* p. 569; *ocrisia* subsp. n. *lita* p. 570; *vena* subsp. n. *sparsa* p. 574; *bicolor* f. n. *leptocosma* p. 578 Argentina, HAYWARD Acta zool. lilloana **8** 1949.

Zizera sylvia see *Zizina otis*.

Zizina otis F. (=*Zizera sylvia* Nakah., *Lycaena aegon* Pryer nec Schiff.) early records, identity of Japanese subspp. pp. 22-26, SHIRÖZU Ent. Rev. Jap. 5.

PIERIDAE.

Pieridae of Air, Fr. Sudan, BERNARDI Mém. Inst. franç. Afr. noire no. 10 pp. 265-267.

Additions and corrections to the types of Pieridae, FERREIRA D'ALMEIDA Rev. Ent., Rio de J. 21 pp. 223-224.

Appias paulina subsp. n. *zondervani* N. Celebes p. 64 figs., TOXOPEUS Zool. Meded. 31.

Ascia monuste early stages p. 5 figs., NIELSEN, E. T. & A. T. Amer. Mus. Novit. no. 1471.

Catopsilia gorgophone subsp. n. *novacaledonia* New Caledonia p. 40 figs., VIETTE Fn. Emp. franç. 13.

Cepora perimale subsp. n. *jeanneli* New Hebrides p. 32 figs., VIETTE t.c.

Colias lesbia pyrrhothea abb. n. *almeidai* p. 2, *strandi*, *costa-limai* p. 3, *williamsi* Brazil, *forbesi* Uruguay p. 4; l. p. f. *heliceoides* abb. n. *lutzi*, *travassosi* p. 2, *schweizeri* p. 3 Brazil figs., DE BIEZANKO Agros 2 1949 no. 2.—*C. australis* Vty. & subsp. *calida* Vty. nomenclature discussed; a. (=*alfacariensis* Berg.) p. 8, HEMMING & BERGER Lambillionea 50.—

C. phicomone var. n. *julianii* Spain p. 11, HOSPITAL Trab. Mus. Cienc. nat. Barcelona (N.S. Zool.) 1 1948 no. 2.—*C. hecla sulitelma*, *nastes werdandi* and intermediary ff. characters p. 112-118 figs., KAISILA Ann. ent. fenn. 16.—*C. hyale* ab. n. *sagittata* Poland p. 240, SCHNAIDER Polsk. Pismo ent. 19.—*C. hyale*, *australis* comparison of characters pp. 114-118 figs., VALLINS Ent. Gaz. 1; DEWICK pp. 119-120; HARBOTTLE pp. 120-123.

Colotis chrysone r. n. *patrizii*; *danae annae* f. n. *benadirensis* It. Somaliland p. 16, STORACE Ann. Mus. Stor. nat. Genova 64 1949.—*C. erone* f. n. *millari*; *evenina* ff. n. *arcuata* p. 142, *namaqua* p. 143; *pallene* f. n. *absurda* p. 148; *lais* f. n. *felthami* p. 160 S. Africa, VAN SON Transv. Mus. Mem. no. 3 1949.—

C. fausta subsp. n. *somalica* Ital. Somaliland p. 107, CARPENTER & JACKSON Proc. R. ent. Soc. Lond. (B) 19.

Delias crithoe distribution Java pp. 30-45, key to Javanese subspp. p. 33, subsp. n. *perextensa* Java p. 34 figs., TOXOPEUS Idea 8.—*D. stenobaea* ♀ discussed p. 65, TOXOPEUS Zool. Meded. 31.

Euchloë Hb. [1819], *esperi* Kby. designated type, placed on Official List, Bull. zool. Nomen. 4 p. 484.—*E. tagis* subsp. n. *atlascica* Morocco p. 144, RUNGS Bull. Soc. Sci. nat. Maroc 28.

Eurema revision of W. Indian spp. of *dina* group pp. 172-191, key p. 173; *chamberlaini* Butl. (=subsp. *banksi* Clench) p. 178) (with subsp. n. *inaguae* W. Indies p. 179); *emanona* Dill. a subsp. of *nise* Röb. not *venusta* Slat. p. 181; *antillarum* Hall, *sanjuanensis* Wats. p. 186, *memulus* Butl. p. 187 subspp. of *leuce* Boisd. not *dina* Poey; *mayobanex* Butl. a subsp. of *dina* not *helios* Bates p. 189, MUNROE J.N.Y. ent. Soc. 58.

Leptidea sinapis distribution of French varr. pp. 41-44 map, BERNARDI Bull. Soc. ent. Mulhouse 1950.

Mylothris sagala f. n. *umtaliana* S. Rhodesia p. 228, VAN SON Transv. Mus. Mem. no. 3 1949.

Neophasia menapia Feld. (=*ninonia* Boisd., *suffusa* Str., *nigracosta* Comst.); *tau* Scudd. a subsp. not synonym of m. p. 44, CHERMOCK Proc. ent. Soc. Wash. 52.

Nepheronia argia ff. n. *hemicrocea*, *oraria* S. Africa p. 92, VAN SON Transv. Mus. Mem. no. 3 1949.

Pieris Schrank 1801 (type *brassicae* L.) placed on Official List, Bull. zool. Nomen. 4 p. 495.—*P. napi* yellow forms pp. 42-50, KAUTZ Z. wien. ent. Ges. 35.—*P. n. adalwinda* ab. n. *obscura* Finland p. 79 figs., LINGONBLAD Notul. ent. 29.—*P. n. subsp. bryoniae* ab. n. *caesia* Poland p. 259 fig., NIESIOLOWSKI Polsk. Pismo ent. 19.—*P. n. subsp. britannica* mod. *hibernica* characters, RYSZKA Wien. ent. Rdsch. 2 p. 34, Ent. NachrBl. öst. schweiz. Ent. 2 p. 99.

Pontia F. 1807, type *daplidiace* L., placed on Official List, Bull. zool. Nomen. 4 p. 458.

Terias hecabe senegalensis f. n. continua It. Somaliland p. 18, STORACE Ann. Mus. Stor. nat. Genova 64 1949.

Zegris eupheme subsp. n. *maricana* Morocco p. 1 fig., BERNARDI Bull. Soc. ent. Mulhouse 1950.

PAPILIONIDAE (BARONIIDAE,
PARNASSIDAE, TEINOPALPIDAE).

Papilionidae of the Belg. Congo, BERGER Ann. Mus. Congo belge Zool. (3) Sect. ii 8 pp. 1-104.

Graphium tynderaeus ab. n. *confluens* p. 67; *latreillianus theorini* f. n. *xerophila* p. 69; *ucalegon* subsp. n. *schoutedeni* (also Uganda) p. 73, f. n. *fontainei* p. 74; *ucalegonides* ff. n. *addenda* Belg. Congo, *gabrieli* Cameroons, subsp. n. *rileyi* Gold Coast p. 78; *almansor* ff. n. *albescens*, *depuncta* p. 81; *odin* subsp. n. *eyeni* p. 84; *olbrechtsi* sp. n. p. 85; *adamastror* subsp. n. *zongo* p. 88 Belg. Congo, *dimbroko* Sierra Leone, Ivory Coast p. 89; *leonidas* abb. n. *vrydaghi*, *leucosina* Belg. Congo, *djema* Fr. Equatorial Africa p. 91, BERGER Ann. Mus. Congo belge Zool. (3) Sect. ii 8.

Orpheides Hb. [1819] rejected, Bull. zool. Nomen. 4 p. 484.

Papilio L. 1758 (type *machaon* L.) placed on Official List, Bull. zool. Nomen. 4 p. 495.—*P. podalirius* L., *feisthameli* Dup. placed on Official List of specific Trivial Names, Bull. zool. Nomen. 4 p. 499.—*P. ascanus* L., *aristolochiae* Pall. suppressed but validated to Cram. [1775] and F. 1775 respectively, Bull. zool. Nomen. 4 p. 542.—*P. keys* to and notes on American spp. pp. 39-41, BROWN Lep. News 4.—*P. nobilis* subsp. n. *leroyi* p. 20; *sosia* subsp. n. *pulchra* (also Tanganyika) p. 30; *demodocus* abb. n. *dufranei* p. 41, *overlaeti* p. 42; *mechowi*, *gallienus* distinguishing characters p. 43; *mechowi* ab. n. *albomaculata* p. 45; *gallienus* ab. n. *hulstaerti* p. 46 Belg. Congo; *zoroastres plagiatus* ♂ p. 54; *joiceyi* ♀ p. 56, BERGER Ann. Mus. Congo belge Zool. (3) Sect. ii 8.—*P. machaon*

subsp. & ff. pp. 34-37 figs., FISCHER Bull. Soc. ent. Mulhouse 1950.—*P. machaon* ab. n. *quinquemaculatus* Hungary p. 69 figs., BEZSILLA Folia ent. hung. 8 1943.—*P. podalirius* list of subsp. & ff. pp. 44-48 figs., FISCHER Bull. Soc. ent. Mulhouse 1950.—*P. dardanus* f. n. *sylvicola* S. Africa p. 11 fig., VAN SON Trans. Mus. Mem. no. 3 1949.

Parnassius apollo ab. n. *nigromaculatus* Moravia, Silesia p. 12, SKALA Arb. ent. Abt. Landesmus. Brünn no. 3 1936.—*P. mnemosyne* & its groups pp. 54-58, 63-66, 69-73 figs., FISCHER Bull. Soc. ent. Mulhouse 1950.—*P. mnemosyne hartmanni* ab. n. *praniessi* Austria p. 27 fig., HOFFMANN Z. wien. ent. Ges. 35.—*P. phoebus* & its groups pp. 79-82, 88-90, FISCHER Bull. Soc. ent. Mulhouse 1950.—*P. glacialis*, *subbendorfii*, *nomion* eggs pp. 23-26 figs., ISHIHARA Trans. Kansai ent. Soc. 15.

Thais polyxena abb. pp. 13-16 (1 1949), pp. 10-13 (2 1950) figs., GERHARDINGER Wien. ent. Rdsch.—*T. polyxena* abb. pp. 52-55, 74-76, 87-89; f. n. *bellaformis* [?Austria] p. 75, GERHARDINGER Ent. NachrBl. öst. schweiz. Ent. 2.

HESPERIIDAE.

Notes on Evans' Catalogue of Hesperiidae from Europe . . . , HEMMING Entomologist 83 pp. 84-87.

Male genitalia of Japanese Hesperiids, OGATA Trans. Kansai ent. Soc. 15 pt. I pp. 27-34, 9 figs., pt. 2 pp. 33-47, 40 figs.

Hesperiidae of Liberia, PICARD Bull. Inst. franç. Afr. noire 12 pp. 625-628.

Hesperiids of Morocco, PICARD Bull. Soc. Sci. nat. Maroc 28 pp. 110-135.

Adopaea thaumas ab. n. *alba* Poland p. 243, SCHNAIDER Polsk. Pismo ent. 19.

Augiaades sylvanus ab. n. *albicans* Poland p. 243, SCHNAIDER t.c.—*A. comma* ab. n. *nigrocincta* Moravia p. 25, SKALA Arb. ent. Abt. Landesmus. Brünn no. 3 1936.

Calpodes evansi adult figured p. 15, FREEMAN Field & Lab. 18.

Carcharodus Hb. [1819], *alceaee* Esp. designated type, placed on Official List, Bull. zool. Nomen. **4** p. 484.

Hesperia comma r. n. *maroccana* Morocco p. 129, PICARD Bull. Soc. Sci. nat. Maroc **28**.

Megathymus neumoegeni Edw. (= *aryxna* Dyar, *drucei* Skinn.); *evansi* sp. n. Arizona p. 144, FREEMAN Field & Lab. **18**.

Pyrgus Hb. [1819] (type *alveolus* Hb.) placed on Official List, Bull. zool. Nomen. **4** p. 495.—*P. genitalia* pp. 43–44 figs., DE LAEVER Lambillionea **50**.—*P. (Ateleomorpha) carlinae* & subsp. *cirsii* status & distribution pp. 53–58, PICARD Lambillionea **50**.—*P. carlinae* abb. n. *bitransfossa* p. 68, *squalens* p. 69 Switzerland figs., KAUFFMANN Mitt. schweiz. ent. Ges. **23**.—*P. (P.) malvae* genitalia p. 241, PICARD Rev. franç. Lép. **12**.—*P. armoricanus* r. n. *maroccanus* Morocco p. 121, PICARD Bull. Soc. Sci. nat. Maroc **28**.

Reverdinus stauderi r. *obscuratus* f. n. *rungsi* Morocco p. 119, PICARD t.c.

Rhopalocampta smilacis sp. n. Kwangtung; *benjamini* larva p. 87 figs., MELL Bonn. zool. Beitr. **1**.

Spialia sertorius f. n. *parataras* Switzerland p. 90 figs., KAUFFMANN Ent. NachrBl. öst. schweiz. Ent. **2**.

Spilothyrida Dup. 1835 rejected, Bull. zool. Nomen. **4** p. 484.

Thymele F. 1807, type *tages* L., rejected, Bull. zool. Nomen. **4** p. 458.

Thymelicus acteon r. n. *maurus* p. 126; *lineola* r. n. *ifranensis* p. 128 Morocco, PICARD Bull. Soc. Sci. nat. Maroc **28**.

Wallengrenia otho & subspp. distribution, U.S.A. p. 78, FREEMAN Field & Lab., Dallas **18**.

Heterocera.

Microlepidoptera collected by Brandt in Persia, II, AMSEL Ark. Zool. (2) **1** pp. 223–257, 5 pls.

Heterocera of Aïr, Fr. Sudan, BRADLEY, COLLINS & FLETCHER Mém. Inst. franç. Afr. noire no. 10 pp. 271–272.

Additions to list of Lepidoptera of Malta, DARLOW Entomologist **83** pp. 269–271.

Additions to list of Maltese Heterocera, DE LUCCA Ent. mon. Mag. **86** pp. 232–233.

Additional records of Microlepidoptera from Malta, DE LUCCA Entomologist **83** pp. 249–251.

Discussion on Linnean subgeneric names of *Phalaena*, with proposals to Int. Comm., FRANCLEMENT J.N.Y. ent. Soc. **58** pp. 41–53.

Subventral tubercles of Saturniid larvae, MUNROE Ent. News **61** pp. 39–41.

Recent additions to Heterocera of Malta, VALLETTA Entomologist **83** pp. 252–254.

Microlepidoptera of cruise of "Bougainville" to French Antarctic Is., VIETTE Mém. Mus. Hist. nat., Paris (N.S.) **27** 1948 pp. 1–28, 2 pls. 22 figs.

Microlepidoptera of Würtemberg, WÖRZ Jh. Ver. vaterl. Naturk. Württemb. **97-101** 1949 pp. 220–254; **102-105** pp. 49–64.

SYNTOMIDAE (AMATIDAE, CTENUCHIDAE, EUCHROMIIDAE).

Euchromiidae of Kartabo, Br. Guiana and Caripito, Venezuela, FLEMING Zoologica, N.Y. **35** pp. 209–216.

Autochloris umbratus sp. n. Venezuela p. 214, FLEMING t.c.

Poecilosoma chrysis larva p. 211, FLEMING t.c.

ARCTIIDAE (including

HYPSIDAE and PERICOPIDAE).

Contribution to the knowledge of Arctiids, XXI–XXII, TRAVASSOS Rev. bras. Biol. **10** pp. 217–240, 61 figs., 447–464, 40 figs.

Amplicincia gen. n. for *Cincia pallida* Btlr. (type), *C. mixta* Möschl. p. 312, key p. 313; *fletcheri* p. 315, *lathyi* p. 316, *walkeri* p. 318 spp. n. Jamaica figs., FIELD Proc. U.S. nat. Mus. **100** no. 3264.

Arctia caja ab. n. *kadocsae* Hungary p. 68 figs., BEZSILLA Folia ent. hung. **8** 1943.

Automolis iragorri, ochracea see
Idalus; *carinosa* see *Rhipha*.

Bertholdia brasiliensis Hmps. (= *steinbachi* Roths.) p. 453; *pseudofumida* p. 461, *almeidai* p. 462 spp. n. Brazil figs., TRAVASSOS Rev. brasil. Biol. 10.

Callimorpha Latr. (= *Panaxia* Tams) type *dominula* L. not *jacobaeae* L. p. 199, FRANCLEMONT Entomologist 83.

Cincia key to spp. p. 319, FIELD Proc. U.S. nat. Mus. 100 no. 3264.—*C. pallida, mixta* see *Amplicincia*; *nephelistis* see *Paramulona*; *muelleri* see *Hypoprepia*.

Coscinia cribaria ab. n. *nigromarginata* Finland p. 82 figs., LIN-GONBLAD Notul. ent. 29.—*C. striata* egg p. 139, EKSTRÖM Opusc. ent. Lund 15.—*C. striata* subsp. n. *hospitali* Spain p. 17, MARTEN Trab. Mus. Cienc. nat. Barcelona (N.S. Zool.) 1 1948 no. 2.

Hypoprepia muelleri Dyar from *Cincia* p. 326, FIELD Proc. U.S. nat. Mus. 100 no. 3264.

Idalus list of spp. p. 217; *agastus* p. 218, *herois* p. 223, *pichesensis* p. 232 re-descriptions; *iragorri* Dogn. p. 228, *ochracea* Roths. p. 234 from *Automolis* figs., TRAVASSOS Rev. brasil. Biol. 10.

Ocnogyna latreillei f. n. *primula* Barcelona p. 55 fig., MARTEN Z. Lepid. 1.

Panaxia see *Callimorpha*.

Paracincia gen. n. p. 321, *butleri* (type) p. 322, *dognini* p. 323 spp. n. Jamaica figs., FIELD Proc. U.S. nat. Mus. 100 no. 3264.

Paramulona nephelistis Hmps. from *Cincia* p. 326, FIELD t.c.

Parasemia plantaginis Swiss forms p. 51, KESSLER Ent. NachrBl. öst. schweiz. Ent. 2.

Parvicincia gen. n. p. 323, *belli* sp. n. Jamaica p. 324 figs., FIELD Proc. U.S. nat. Mus. 100 no. 3264.

Rhipha carinosa Schaus from *Automolis* p. 237 figs., TRAVASSOS Rev. brasil. Biol. 10.

Spilosoma menthastris ab. n. *romaniszyni* Poland p. 243 figs., SCHNAIDER Polsk. Pismo ent. 19.

Teraconta uhrik-mészárosi sp. n. E. Africa p. 97, SZENT-IVÁNY Folia ent. hung., Budapest 7 1942.

AGROTIDAE (PHALAENIDAE,
NOCTUIDAE) (including
AGARISTIDAE).

Agrotidae of China collected by H. Höne, DRAUDT Mitt. münchen. ent. Ges. 40 pp. 1-174, 18 pls.

British Noctuae and their varieties, Suppl. [contd.], TURNER Ent. Rec. 62 sep. pp. 77-94.

Agrotids from Easter I., VIETTE Bull. Inst. Sci. nat. Belg. 26 no. 39 pp. 4-6.

Catocalinae of New Caledonia and New Hebrides, VIETTE Pacific Sci., Honolulu 4 pp. 139-157, 13 figs.

Acronycta aceris ab. n. *anthracina* Sweden p. 82 fig., BURRAU Opusc. ent., Lund 15.—*A. geminata* p. 8, *yangtseana* p. 9 spp. n.; *metaxantha* subsp. n. *funesta* p. 11 China figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Agroperina rufa sp. n. China p. 101 figs., DRAUDT t.c.

Agrotis incommodooides n. n. for *incommoda* Berio nec Wlk. p. 89, BERIO Boll. Soc. ent. ital. 80.—*A. imperator* ♂ p. 196 fig., CHNEOUR Bull. Soc. Hist. nat. Afr. N. 40.—*A. grisescens* var. n. *coralita* Spain p. 13, HOSPITAL Trab. Mus. Cienc. nat. Barcelona (N.S. Zool.) 1 1948 no. 2.—*A. cinerea* ab. n. *zeleznii* Moravia, Silesia p. 42, SKALA Arb. ent. Abt. Landesmus. Brünn no. 3 1936.—*A. stenibergmani* Bryk (with f. *poverina* B.) (from *Rhyacia*) reduced to subsp. of *militaris* Stgr.; *furushonis* Mats. (from *Rhyacia*) a form of *militaris* p. 130, BOURSIN Z. wien. ent. Ges. 33 1948.

Amathes nivescens Rbl. a form of *ashworthi* Dbd. not *Rhyacia griseescens* Schiff.; *ochreago* Hb. (= *Hiptelia habichi* Rbl.) p. 132, BOURSIN t.c.—*A. iners* f. n. *tibetica* China p. 84 figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Amphidrina tibetica sp. n. China p. 118 figs., DRAUDT t.c.

Amphipoea Billb. *secalis* L. invalid as type and *nictitans* L. designated type p. 148, FRANCLEMONT Bull. Brooklyn ent. Soc. 45.

Amphipyra costiplaga, *acheron* p. 84, *charon* p. 85, *deleta* p. 86 spp. n. China figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Anarta albicilia sp. n. China p. 23 figs., DRAUDT t.c.

Anepia cinochrea Chrét. (from *Dianthoecia*) reduced to form of *silenes* Hb. p. 133, BOURSIN Z. wien. ent. Ges. 33 1948.

Anophia albomacula f. n. *privata* China p. 166 figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Antitype shensiana sp. n. China p. 71 figs., DRAUDT t.c.—*A. annibalella*, *amilcarella* spp. n. Tunis p. 141, LUCAS Bull. Soc. ent. Fr. 55.

Apamea discussion of type; *amputatrix* Fitch (= *arctica* Frey.) p. 146, FRANCLEMONT Bull. Brooklyn ent. Soc. 45.—*A. furva* subsp. n. *britannica* Britain p. 67, COCKAYNE Ent. Rec. 62.

Arenarba gen. n. for *Ozarba* *arenacea* Hmps. (type), *O. destituta* Moore, *O. perplexa* Saalm. p. 157 figs., BERIO Ann. Mus. Stor. nat. Genova 64.

Arenostola punctivena sp. n. China p. 127 figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Athaumasta polioides sp. n. China p. 72 figs., DRAUDT t.c.

Athyryma triangulifera sp. n. China p. 166 figs., DRAUDT t.c.

Aucha tienmushani p. 114, *pronans*, *dizyx* p. 115 spp. n. China figs., DRAUDT t.c.

Baniana cohaerens sp. n. China p. 167 figs., DRAUDT t.c.

Blepharidia smaragdistis p. 73, *lamida* p. 74, *poeциla* p. 75, *olivascens*, *retrahens* p. 76, *retracta* p. 77 spp. n. China figs., DRAUDT t.c.

Bocula gaedei sp. n. China p. 167 figs., DRAUDT t.c.

Bombycia pygmaea p. 61, *aplectoides* (with f. n. *fulvipicta*) p. 62 spp. n. China figs., DRAUDT t.c.

Bombyciella gen. n. (Cuculliinae), *talpa* (type), *sericea* spp. n. China p. 63 figs., DRAUDT t.c.

Brevipecten costiplaga sp. n. China p. 169 figs., DRAUDT t.c.

Bryophila prasina p. 12, *canoparsa*, *tripuncta* p. 13, *brunneola* p. 14, *minutissima* (with subsp. n. *hunana*) p. 15 spp. n. China figs., DRAUDT t.c.

Bryotype harmodina sp. n. China p. 73 figs., DRAUDT t.c.

Caenurgia chloropha Hb. (= *Drasteria convalescens* Gn.) from *Xestia* p. 154, FRANCLEMONT Bull. Brooklyn ent. Soc. 45.

Calamistis longistriga sp. n. China p. 127 figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Callierges draeskei sp. n. China p. 58 figs., DRAUDT t.c.

Calliocloa gen. n. (Zenobiinae), *trapezoides* sp. n. China p. 129 figs., DRAUDT t.c.

Calpe gruësa sp. n. China p. 168 figs., DRAUDT t.c.

Calymnia inconspicua sp. n. China p. 126 figs., DRAUDT t.c.

Caradrina (*Paradrina*) *danieli* sp. n. Morocco p. 152 fig., RUNGS Bull. Soc. Sci. nat. Maroc 28.

Catocala nupta ab. n. *quasiinterrupta* Poland p. 254, SCHNAIDER Polsk. Pismo ent. 19.

Cerapteryx poecila, *fumosa* spp. n. China p. 46 figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Chamrysilla gen. n. (Erastriinae), *ampolleta* sp. n. China p. 138 figs., DRAUDT t.c.

Charierges gen. n. (Cuculliinae) p. 59, *nigralba* (type) (with f. n. *medioatra*), *brunneomedia* spp. n. China p. 60 figs., DRAUDT t.c.

Chloridea maritima (with subsp. n. *hungarica* Hungary etc. p. 68) p. 66, *dipsacea* p. 69 characters, Kovács Folia ent. hung. (N.S.) 3.

Chutapha beata sp. n. China p. 105 figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Chytobrya gen. n. (Bryophilinae) p. 15, *bryophiloides* (type), *fraudatrix* p. 16, *perlopisis*, *albida* p. 17 spp. n. China figs., DRAUDT t.c.

Chytonix adusta, *albiquadrata* p. 110, *imitans* p. 111, *latipennis*, *erastroides* p. 112, *minima* p. 113 spp. n. China figs., DRAUDT t.c.

Cirphis foranea p. 47, *pallidior* p. 48, *undina* (with f. n. *major*), *transversata* p. 49 (with f. n. *stramentacea*), *rosadia* p. 50, *macellaria*, *tricuspis* p. 51, *mesotrostella*, *mesotrostina* p. 52, *striatella*, *sigma*, *pastearis* p. 53, *discilinea* p. 54, *agnata* p. 55 spp. n.; *placida* f. n. *suavis* p. 54 China figs., DRAUDT t.c.

Conistra castaneofasciata subsp. n. *punctillum*; *ardescens* subsp. n. *griseescens* China p. 81 figs., DRAUDT t.c.

Cosmia aurantiago p. 81, *auragides* p. 82, *cirphidiago* p. 83 spp. n.; *japonago* subsp. n. *likianago* p. 82 China figs., DRAUDT t.c.

Craniophora taipaishana p. 6, *simillima*, *inquieta* p. 7 spp. n. China figs., DRAUDT t.c.

Cytocanis cerocalina sp. n. China p. 124 figs., DRAUDT t.c.

Dasyerges gen. n. (Cuculliinae), *poliastis* sp. n. China p. 59 figs., DRAUDT t.c.

Dasypolia templi subsp. n. *powelli*; *ferdinandi* subsp. n. *haroldi* Morocco p. 148, RUNGS Bull. Soc. Sci. nat. Maroc 28.

Dasysspoudaea zuni sp. n. New Mexico p. 83 fig., McELVARE Bull. Brooklyn ent. Soc. 45.

Dianthoecia cinochrea see *Anepia*.

Diarisia rosaria characters p. 25; *pseudorosaria* sp. n. p. 26 (with subsp. n. *freemanii* p. 28) Canada; geographic variation in ♂ genitalia p. 28 figs., HARDWICK Canad. Ent. 82.—*D. urupina* Bryk (=subsp. *distinctissima* Bryk) a subsp. of *brunnea* Schiff. not *Rhyacia collina* B. p. 132, BOURSIN Z. wien. ent. Ges. 33 1948.

Dichagyris leucomelas Brdt. reduced to subsp. of *melanurooides* Kozh. p. 130, BOURSIN Z. wien. ent. Ges. 33 1948.

Dichonia areolona sp. n. China p. 64 figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Diphthera hönei sp. n. China p. 4 figs., DRAUDT t.c.

Discestra mienshani sp. n. China p. 20 figs., DRAUDT t.c.

Drasteria convalescens see *Caenurgia chloropa*.

Eccrita ludicra f. n. *major* China p. 152 figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Enargia fuliginosa sp. n. China p. 126 figs., DRAUDT t.c.

Eriopus batanga p. 106, *quadralba* p. 107 spp. n. China figs., DRAUDT t.c.

Eriopyga cirphidia sp. n. China p. 42 figs., DRAUDT t.c.

Eublemma savour sp. n. Eritrea p. 89, BERIO Boll. Soc. ent. ital. 80.—*E. batanga* sp. n. China p. 130 figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Eumichtis euplexina p. 67, *praetermissa* p. 68 spp. n. China figs., DRAUDT t.c.—*E. susica* sp. n. Morocco p. 149 figs., RUNGS Bull. Soc. Sci. nat. Maroc 28.

Euplexia columbina p. 91, *jordansi* p. 92, *nigrina* p. 93 spp. n. China figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Eupsilia sodalis sp. n. China p. 80 figs., DRAUDT t.c.

Eustrotia regula Gaede, *pseudopunctigera* Ber., *pluristriata* Ber. from Ozarba p. 157, BERIO Ann. Mus. Stor. nat. Genova 64.—*E. accentuata* sp. n. Eritrea p. 91, BERIO Boll. Soc. ent. ital. 80.—*E. plumbicilia*, *curvibasis* spp. n. China p. 139 figs., DRAUDT Mitt. münchen. ent. Ges. 40,

Eutelia hamulatrix sp. n. China p. 140 figs., DRAUDT t.c.

Euxoa revision of spp. of eastern North America pp. 355–408, key to ♀♂ p. 365; *servita* subsp. n. *novangliae* New Hampshire etc. p. 391 figs., McDUNNOUGH Bull. Amer. Mus. nat. Hist. 95.—*E. orbicularis* Smith (nec Walker), *incallida* Smith (nec Walker) status discussed p. 84, McDUNNOUGH Bull. Brooklyn ent. Soc. 45.—*E. hastifera* subsp. n. *marocana* Morocco p. 147, BOURSIN & RUNGS in RUNGS Bull. Soc. Sci. nat. Maroc 28.

Euxoamorpha gen. n. (Agrotinae), *eschata* sp. n. Chile p. 40 figs., FRANCLEMENT Proc. ent. Soc. Wash. 52.

Fagitana gigantea sp. n. China p. 109 figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Fulvarba gen. n. for *Ozarba fulvescens* Hmps. p. 156 figs., BERIO Ann. Mus. Stor. nat. Genova 64.

Galactomoia acronictoides sp. n. Somalia p. 92, BERIO Boll. Soc. ent. ital. 80.

Gelastocera fuscibasis, discalis spp. n. China p. 148 figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Gracilipalpus subsignatus sp. n. China p. 86 figs., DRAUDT t.c.

Grotella vauriae sp. n. Texas p. 117 fig., McELVARE Bull. Brooklyn ent. Soc. 45.

Hadena compta British records p. 121 figs., YOUNDEN Entomologist 83.

Hadjina attinis [in plate legend as *affinis*] sp. n. China p. 118 figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Hadula sublimis sp. n. China p. 37 figs., DRAUDT t.c.

Harmodia confucii p. 34, *persparcata*, *perornata* p. 35, *gemella* p. 36 spp. n.; *corrupta* subsp. n. *splendida*; *eximia* subsp. n. *gloriosa* p. 37 China figs., DRAUDT t.c.—*H. caesia* var. n. *grisea* Spain p. 14, HOSPITAL Trab. Mus. Cienc. nat. Barcelona (N.S. Zool.) 1 1948 no. 2.

Herminia derivalis ab. n. *czernyi* Moravia p. 71, SKALA Arb. ent. Abt. Landesmus. Brünn no. 3 1936.

Hermonassa arenosa subsp. *amurensis* Kozh. (= *yeterofuna* Bryk) p. 131, BOURSIN Z. wien. ent. Ges. 33 1948.

Hiptelia habichi see *Amathes ochreago*.

Homoptera galbanata, penna see *Zale lineosa*.

Hylophila nereida, amarilla spp. n. China p. 147 figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Hylophilodes pacifica further description; *elegans* sp. n. China p. 146 figs., DRAUDT t.c.

Hypsophila alpina sp. n. China p. 79 figs., DRAUDT t.c.

Hyssia hadulina p. 39, *adusta* p. 40, *tessellum* p. 41 spp. n. China figs., DRAUDT t.c.

Incita aurantiaca larva p. 21, EVANS Pan-Pacif. Ent. 26.

Ipiristis gen. n. (Zenobiinae) p. 124, *boursini* sp. n. China p. 125 figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Lasiestra alpina p. 23, *poliades* p. 24 spp. n. China figs., DRAUDT t.c.

Lasionycta leuconephra, aplectoides spp. n. China p. 25 figs., DRAUDT t.c.

Lasiplexia cupreomicans p. 102, *figulimargo, semirena* p. 103 spp. n. China figs., DRAUDT t.c.

Lasiridia gen. n. (Hadeninae), *iome-las* sp. n. China p. 39 figs., DRAUDT t.c.

Leucania monimalis p. 55, *cuneilinea, rufotumata* p. 56 spp. n. China figs., DRAUDT t.c.

Lithacodia gracilior p. 134, *superior* (with f. n. *sordidata*), *olivella* p. 135, *albiclava* p. 136 spp. n. China figs., DRAUDT t.c.

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Lophotyna argillacea sp. n. China p. 121 figs., DRAUDT t.c.

Madopa salicalis larva p. 97 figs., HEDGES Entomologist 83.

Marathyssa cuneades sp. n. China p. 141 figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Meganephria albithorax, adusta p. 66 (with f. n. *albimacula* p. 67) spp. n. China figs., DRAUDT t.c.—*M. oxyacanthae* ab. n. *albida* Poland p. 254, SCHNAIDER Polsk. Pismo ent. 19.

Megatomis albivia sp. n. Br. Guiana, Trinidad p. 201, HAMPSON in LAMONT & CALLAN Zoologica, N.Y. 35.

Melaleucantha gen. n. (Erastrinae) *albibasis* sp. n. China p. 137 figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Meropleon diversicolor Morr., *ambifusca* Newm. from *Oligia* p. 145, FRANCLEMONT Bull. Brooklyn ent. Soc. 45.

Metachrostis incomposita sp. n. Algeria p. 142, LUCAS Bull. Soc. ent. Fr. 55.—*M. chinensis* see *Ozana*.

Metlaouia chpakowskyi Chn. (from *Simyra*) reduced to form of *oberthuri* Clt. p. 133, BOURSIN Z. wien. ent. Ges. 33 1948.

Miniophyllodes catalai sp. n. Madagascar p. 47 fig., VIETTE Nat. malgache 2.

Miracopa gen. n. (Zenobiinae), *prodigiosa* sp. n. China p. 119 figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Miselia advena ab. n. *calina* Spain p. 14, HOSPITAL Trab. Mus. Cienc. nat. Barcelona (N.S. Zool.) 1 1948 no. 2.

Morrisonia angarensis sp. n. China p. 42 figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Negeta noloides sp. n. China p. 151 figs., DRAUDT t.c.

Nonagria dubiosa sp. n. China p. 127 figs., DRAUDT t.c.

Nyctyria pectinata sp. n. China p. 65 figs., DRAUDT t.c.

Obarza gen. n. for *Ozarba zernyi* Ber. p. 157 figs., BERIO Ann. Mus. Stor. nat. Genova 64.

Ochropleura kaaba Ob. reduced to subsp. of (*Ogygia*) *fidelis* Joann. p. 131, BOURSIN Z. wien. ent. Ges. 33 1948.

Odontestra atuntseana p. 21, *roseo-marginata* p. 22 spp. n. China figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Oederemia nanata, *esox*. spp. n. China p. 18 figs., DRAUDT t.c.

Oligia niveiplaga p. 97, *medio-fasciata* p. 98, *apameoides*, *nigri-thorax* p. 99, *sodalis* p. 100 spp. n. China figs., DRAUDT t.c.—*O. diversicolor*, *ambifusca* see *Meropleon*.

Oria extraordinaria sp. n. China p. 128 figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Ozana gen. n. for *Metachrostis chinensis* Leech p. 156 figs., BERIO Ann. Mus. Stor. nat. Genova 64.

Ozarba list of spp., sections pp. 131–155 figs., BERIO Ann. Mus. Stor. nat. Genova 64.—*O. rectificata* India p. 89, *festiva* Pretoria, *nicotrai* Somalia p. 90 spp. n. fig., BERIO Boll. Soc. ent. ital. 80.—*O. acantho-lipina* sp. n. China p. 133 figs., DRAUDT Mitt. münchen. ent. Ges. 40.—*O. fulvescens* see *Fulvarba*; *arena-cea*, *destituta*, *perplexa* see *Arenarba*; *zernyi* see *Obarza*; *regula*, *pseudo-punctigera*, *pluristriata* see *Eustrotia*.

Pachetra fulminea ab. n. *grisescens* Poland p. 248, SCHNAIDER Polsk. Pismo ent. 19.

Palaeosafia gen. n. (Catocalinae), *hönei* sp. n. China p. 154 figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Panolis exquisita, *pinicortex* spp. n. China p. 45 figs., DRAUDT t.c.

Parastichtis sublustris f. n. *dahl-bomi* Sweden p. 83 fig., BURRAU Opusc. ent., Lund 15.—*P. longilinea* p. 87, *petrolignea*, *submediana* p. 88 spp. n. China figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Perigea cyclicoides, *atronitens* p. 94, *rubecula* p. 95, *cinifacta*, *affinis* p. 96 spp. n. China figs., DRAUDT t.c.

Perigrapha uniformis, *albilinea* spp. n. China p. 43 figs., DRAUDT t.c.

Phalaena proposal to Int. Comm. for suppression pp. 46–49, FRANCLEMONT J.N.Y. ent. Soc. 58.

Phyllophila yangtsea sp. n. China p. 133 figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Physetica agrotiformis sp. n. China p. 44 figs., DRAUDT t.c.

Phytometra chrysitis ab. *juncta* f. n. *parva* Poland p. 254, SCHNAIDER Polsk. Pismo ent. 19.—*P. lenzeni* sp. n. China p. 157 figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Platysenta tibetica sp. n. China p. 120 figs., DRAUDT t.c.

Plusidia imperatrix sp. n. China p. 155 figs., DRAUDT t.c.

Poecilogramma bellissima sp. n. China p. 108 figs., DRAUDT t.c.

Polia albirena p. 26, *lasiestrina*, *yuennana* p. 27, *costirufa* p. 28, *roseipicta* p. 29, *griseifusa* p. 30, *albomixta*, *atrax* p. 31, *suavina* p. 32, *abnormis* p. 33 spp. n.; *suavis* f. n. *suaveola* p. 32; *illoba* f. n. *pallida* p. 33 China figs., DRAUDT t.c.—*P. nana* var. n. *leoncae* Spain p. 14, HOSPITAL Trab. Mus. Cienc. nat. Barcelona (N.S. Zool.) 1 1948 no. 2.

Polydesma discalis subsp. n. *melli* China p. 162 figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Prionoxanthia gen. n. (Zenobiinae), *cinnamomina* sp. n. China p. 122 figs., DRAUDT t.c.

Procos crytora sp. n. U.S.A. p. 144
figs., FRANCLEMENT Bull. Brooklyn ent. Soc. 45.

Protarache polygrapha sp. n. Eritrea p. 92, BERIO Boll. Soc. ent. ital. 80.

Proxenus rionegrensis early stages p. 140 figs., CHIARELLI DE GAHAN & TOURON Rev. Invest. agric., B. Aires 4.

Pyrrhia stupenda p. 122, *abrasa* p. 123 spp. n. China figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Raphia corax sp. n. China p. 159 figs., DRAUDT t.c.

Rhabinogana gen. n. (Zenobiinae), *albistriga* sp. n. China p. 117 figs., DRAUDT t.c.

Rhyacia mendica f. n. *norrländica* p. 82 (with ab. n. *infuscata* p. 83) Sweden figs., BURRAU Opusc. ent., Lund 15.—*R. stenibergmani* & f. *poverina*, *furushonis* see *Agrotis militaris*; *collina* subsp. *urupina* see *Darsia brunnea*; *griesescens* subsp. *nivescens* see *Amathes ashworthi*.

Risoba rectilinea sp. n. China p. 143 figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Rusina Steph. (= *Stygiostola* Hmps.) p. 149, FRANCLEMENT Bull. Brooklyn ent. Soc. 45.—*R. bicolorago*, *circellaris* & others see *Sunira*.

Sedina buettneri larva p. 47, BLAIR Ent. mon. Mag. 86.

Sesamia cretica Led. (= *gracilis* Rbl.) p. 133, BOURSIN Z. wien. ent. Ges. 33 1948.

Sidemia dimorpha sp. n. Morocco p. 150 fig., RUNGS Bull. Soc. Sci. nat. Maroc 28.

Simyra chpakowskyi see *Metlaouia*.

Stenoloba marina, *basiviridis* p. 131, *oculata* p. 132 spp. n. China figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Stygiostola see *Rusina*.

Sunira gen. n. for *Rusina bicolorago* Gn. (type), *R. circellaris* Hufn. & other spp. p. 148, FRANCLEMENT Bull. Brooklyn ent. Soc. 45.

Sydiva versicolora sp. n. China p. 71 figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Synna pretiosissima sp. n. China p. 160 figs., DRAUDT t.c.

Taenerema gen. n. (Zenobiinae) p. 100, *hönei* sp. n. China p. 101 figs., DRAUDT t.c.

Telesilla curiosa sp. n. China p. 109 figs., DRAUDT t.c.

Thioptera n. n. for *Xanthoptera* Gn. nec Sodoffsky p. 271, FRANCLEMENT Proc. ent. Soc. Wash. 52.

Thyrostipa chekiana sp. n. China p. 170 figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Tiracola magusina sp. n. China p. 38 figs., DRAUDT t.c.

Toxocampa viciae subsp. n. *violaceogrisea*; *angustissima* sp. n. China p. 165 figs., DRAUDT t.c.

Trachea prasinatra p. 90, *tsinlinga* p. 91 spp. n. China figs., DRAUDT t.c.

Trichestra chinensis p. 19 (with f. n. *shansina*), *persimilis* p. 20 spp. n. China figs., DRAUDT t.c.

Trichoridia leuconephra, *flavicans* spp. n. China p. 78 figs., DRAUDT t.c.

Trichosternum gen. n. (Cucullinae) p. 79, *likiangia* sp. n. China p. 80 figs., DRAUDT t.c.

Trigonophora meticolodina sp. n. China p. 104 figs., DRAUDT t.c.

Trisuloides luteifascia ♂ p. 11; *nigerrima* sp. n. China p. 12 figs., DRAUDT t.c.

Tyana fuscitorna p. 144, *hönei* p. 145 spp. n. China figs., DRAUDT t.c.

Tympanistes yuennana sp. n. China p. 149 figs., DRAUDT t.c.

Unca status discussed p. 149, FRANCLEMENT Bull. Brooklyn ent. Soc. 45.

Valeria euplexina p. 68, *muscosula* p. 69, *mieshani* p. 70 spp. n. China figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Westermannia nobilis, *jucunda* p. 150, *antaplagica* (with f. n. *infumata*, subsp. n. *ochracea*) p. 151 spp. n. China figs., DRAUDT Mitt. münchen. ent. Ges. 40.

Xanthoptera see *Thioptera*.

Xestia chloropha see *Caenurgia*.

Zale phaeocapna sp. n. U.S.A. p. 150; *lineosa* Wlk. (=Homoptera *galbanata* Morr., *penna* M.) p. 154, FRANCLEMENT Bull. Brooklyn ent. Soc. 45.

Zethes bella sp. n. China p. 170 figs., DRAUDT Mitt. münchen. ent. Ges. 40.

LYMANTRIIDAE.

Characters of undetermined Lymantriid feeding on Mantid eggs, RISBEC C.R. 1er Conf. int. Africaines Ouest 1 pp. 301-302.

Cyphopora dubia see *Eloria onaba*.

Eloria revision pp. 813-865, keys to spp. groups pp. 817, 823, 827, 828, 834, 859; *muzo* p. 818, *melarrhoys* p. 842 Colombia, *peruvia* nap. 826, *melaphleba* p. 849 Peru, *ucayali* Peru, Colombia, Bolivia p. 827, *cavallo* Peru, Bolivia p. 839 (with subssp. n. *burityensis*, *zoya* Brazil p. 840), *teffe* p. 842, *batesi* p. 844, *charassomena* p. 846, *copharpe* p. 858 Brazil, *guen'ei* Fr. Guiana p. 843, *roraima* Br. Guiana, *rosenbergi* Ecuador, Colombia p. 846, *hoplochares* Brazil, Peru, Bolivia, *pelocraspeda* Colombia, Ecuador, Peru p. 850 (with subssp. n. *mossi* Brazil p. 851), *fumicosta* Guatemala, Nicaragua, Mexico p. 854, *lyra* Ecuador p. 860, *orosi* Costa Rica (with subssp. n. *borealis* Honduras) p. 862 spp. n.; *noyesi* Schaus (=*corvicoa* S., *edena* S., *captiosa* Draudt, *schausi* D.) p. 824 (with subssp. n. *goyaz* Brazil p. 825); *moesta* Wlk. (=*Penora ombrea* Druce, *E. clodia* Druce, *nigella* Dogn., *moeschleri* Dogn., *ninya* Dogn., *nimbosa* Dogn.) p. 830; *festiva* Cram. (=*spectra* Hb.) p. 837; *insulsa* Draudt (=*ebba albicollis* Draudt) p. 839; *onaba* Druce (=*Cyphopora dubia* Warr.) p. 848; *walkeri* n. n. for *festiva* Wlk. nec Cram. p. 851; *venosa* Wlk. (=*lucida* Wlk.) p. 857; *serena* Schaus, *aroensis* S. races of *subapicalis* Wlk. p. 822 figs., COLLENETTE Ann. Mag. nat. Hist. (12) 3.

Lymantria dispar mut. n. *rara* p. 175, KLATT Zool. Anz. 144 1944.—*L. dispar* abb. n. *albofasciata*, *obscurata* p. 245, *fasciata*, *marmorea*, *grisea*, *subbrunnea*, *albicans* p. 253 Poland, SCHNAIDER Polsk. Pismo ent. 19.

Orgyia antiqua ab. n. *ovomaculata* Poland p. 252, SCHNAIDER t.c.—*O. basalis* f. n. *nigripuncta* Uganda p. 256, SEVASTOPULO Entomologist 83.—*O. recens* Hb. nomenclature discussed p. 53, LEMPKE Ent. Ber., Amst. 13.

Penora ombrea see *Eloria moesta*.

NOTODONTIDAE (including THAUMETOPOEIDAE).

Notodontidae of Swedish Expedition 1934 to Burma and Br. India, BRYK Ark. Zool. 42A no. 19 pp. 1-46, 4 pls.

Classification of Notodontoidea, KIRIAKOFF Bull. Ann. Soc. ent. Belg. 86 pp. 236-248.

Angustiala gen. n. p. 3, *cryptocephala* sp. n. Burma p. 4 figs., BRYK Ark. Zool. 42A no. 19.

Cerura malaisei f.n. *nonareolata* Burma p. 29, BRYK t.c.

Chadisra madena see *Fentonia orbifer*.

Damata longipennis subsp. n. *japonica* Japan p. 30, BRYK Ark. Zool. 42A no. 19.

Desmeocraera perdicula sp. n. India p. 55, BRYK Ent. Tidskr. 71.

Dicranura erminea Esp. type discussed; *birmanica* sp. n. N. Burma p. 29, BRYK Ark. Zool. 42A no. 19.—*D. vinula* see *Pania*.

Dudusa sphingiformis subsp. n. *birmana* Burma p. 1, BRYK Ark. Zool. 42A no. 19.

Fentonia orbifer Hps. (=*Chadisra madena* Schaus) p. 25, ROEPKE Ent. Ber., Amst. 13.

Libido gen. n. p. 25, *voluptuosa* sp. n. Burma p. 26 fig., BRYK Ark. Zool. 42A no. 19.

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GEOMETRIDAE.

Geometridae of Pelotas (Rio Grande do Sul) and neighbourhood, DE BIEZANKO 1948 pp. 1-4.

Catalogue of Netherland Geometridae (contd.), LEMPKE Tijdschr. Ent. 92 pp. 113-218, 47 figs.

Designation of type specimens of Guénée's Geometridae in Mus. Hist. nat. Paris, VIETTE Bull. Soc. linn. Lyon 19 pp. 201-206.

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Keys to Chinese genera of Pyralidae, LUH & KUAN Ann. ent. sinici 1 pp. 95–116, 27 figs.

Pyralidae of Eger, Hungary, RES-KOVITS Folia ent. hung. 7 1942 pp. 102–105.

Pyralids from Easter I., VIETTE Bull. Inst. Sci. nat. Belg. 26 no. 39 pp. 3–4.

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Craterellus revision of Western European & N. African spp. pp. 261–277; *tingitanellus* Chr. (= *mauretanicus* M.-Rutz) p. 265; *maghrebellus* sp. n. Morocco p. 267 figs., MARION Rev. franç. Lép. 12.

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Sphingidae of Pelotas (Rio Grande do Sul) and neighbourhood, DE BIEZANKO 1948 8 pp.

Amplypterus Hb. [1819] placed on Official List, type *panopus* Cram. not *ganascus* Stoll, Bull. zool. Nomen. 4 p. 508.

Ceratomia kansensis sp. n. Kansas p. 57 figs., HOWE, E. W. & W. H. Ent. News 61.

Deilephila euphorbiae ab. n. aczeli Hungary p. 69 figs., BEZSILLA Folia ent. hung. 8 1943.—*D. elpenor* ab. n. *argentea* Sweden p. 81 fig., BURRAU Opusc. ent., Lund 15.

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List of recorded spp. of Cochlidionidae of China, LUH Peking nat. Hist. Bull. **16** 1948 pp. 91–104.

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Oiketicus mortonjonesi sp. n. Mexico p. 399 figs., VÁZQUEZ G. An. Inst. Biol. Mexico **20**.

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Revision of Ceracidae, DIAKONOFF Bull. Brit. Mus. (Nat. Hist.) Ent. **1** pp. 173–219, 34 figs.

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Pseudeucosma tibetana, *arabescana*, *ornamentana* male characters pp. 243–244 fig., OBRAZTSOV Mitt. münchen. ent. Ges. 40.

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Tachyptilia populella ab. n. *crepusculata* Moravia p. 152, SKALA Arb.
ent. Abt. Landesmus. Brünn no. 3
1936.

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British Oecophoridae and allied
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nat. Hist. Soc. 1948-49 pp. 123-141,
1 col. pl.

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Hist. nat., Paris (N.S.) 27 1948.

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Soc. 14.—*S. lonicerae* early stages
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COLEOPHORIDAE.

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Coleophora risselensis, dianthivora
characters; *fischeri* Mulhouse, klenen-
siewiczi Podolia, Mt. Elburs spp. n.
p. 1 figs., TOLL Bull. Soc. ent. Mul-
house 1950.—*C. olivacea* ab. n.
obscurella Holland p. 167, DOETS Ent.
Ber., Amst. 13.

AEGERIIDAE (SESIIDAE).

Chamaesphecia hungarica Tom. a
good sp. and not var. of *empiformis*
p. 50 figs., ISSEKUTZ Folia ent. hung.
(N.S.) 3.

LYONETIIDAE.

Exala strassenella morphology p.
17, early stages p. 21 figs., VIETTE
Mém. Mus. Hist. nat., Paris (N.S.) 27
1948.

GRACILLARIIDAE.

Gracillaria populetorum abb. n.
obscura, pallida p. 19, *brunnea* p. 20
N. Tyrol, BURMANN Z. wien. ent.
Ges. 3.

TINEIDAE

(including ACROLOPHIDAE).

Characters of undetermined Tineid
feeding on Mantid eggs, RISBEC C.R.
1^{er} Conf. int. Africanistes Ouest 1
pp. 299-301, 4 figs.

Euplocera variegata sp. n. Morocco
p. 143, LUCAS Bull. Soc. ent. Fr. 55.

Pringleophaga kerguelensis mor-
phology p. 2, early stages p. 5 figs.,
VIETTE Mém. Mus. Hist. nat., Paris
(N.S.) 27 1948.

Tinea columbariella characters p.
170 figs., BRADLEY Entomologist 83.

Tineola chneourella sp. n. Tunisia
p. 143, LUCAS Bull. Soc. ent. Fr. 55.

NEPTICULIDAE (STIGMELLIDAE).

Nepticula rhamnella var. n. *pumila*
Italy pp. 49, 74; *nylandriella* var. n.
magdalena Austria p. 72 figs.,
KLIMESCH Ent. NachrBl. öst.
schweiz. Ent. 2.—*N. crantzella* Web.
reduced to race of *steviana* p. 27,
KLIMESCH Wien. ent. Rdsch. 2.

Stigmella marionella sp. n. England
p. 39 fig., FORD Ent. Gaz. 1.

HEPIALIDAE.

Hepialidae of Swedish Expedition 1934 to Burma and Br. India, BRYK Ark. Zool. **42A** no. 19 pp. 49–50, 1 fig.

Hepialidae of the Pfitzner collection, VIETTE Bull. Soc. ent. Fr. **55** pp. 116–119, 6 figs.

Hepialids of S. America, VIETTE Rev. franç. Ent. **17** pp. 52–62, 11 figs.

Blanchardina gen. n. for *Hepialus venosus* Blanch. p. 145 figs., VIETTE Ent. Tidskr. **71**.

Callipielus chiliensis sp. n. Chile p. 74 figs., VIETTE Zool. Meded. **31**.

Dalaca Wlk. (= *Huapina* Bryk, *Maculella* Viette) scope discussed; *nigricornis* Wlk., *parviguattata* Bryk (♀ genitalia) valid spp. not synonyms of *Hepialus venosus* Blanch. p. 144 figs., VIETTE t.c.—*D. noctuides* see *Maculella*; *exul* and other spp. see *Eudalaca*.

Druceiella key to S. American spp. p. 167; *amazonensis* sp. n. Brazil p. 168 figs., VIETTE Bull. Soc. zool. Fr. **75**.

Endoclita javaensis sp. n. Java p. 1 fig., VIETTE Bull. Inst. Sci. nat. Belg. **26** no. 44.

Eudalaca gen. n. for *Dalaca exul* Wlk. and other African spp. p. 146 figs., VIETTE Ent. Tidskr. **71**.

Hepialus ebba sp. n. Burma p. 49 fig., BRYK Ark. Zool. **42A** no. 19.—*H. hecta* f. n. *zetterstedti* Sweden p. 85 fig., BURRAU Opusc. ent., Lund **15**.—*H. venosus* see *Blanchardina*.

Huapina see *Dalaca*.

Maculella gen. n. for *Dalaca noctuides* Pfitz. & Gaede (type) p. 55; *chiliensis*, *variabilis* spp. n. Chile p. 57 figs., VIETTE Rev. franç. Ent. **17**.—See *Dalaca*.

Oxycanus Wlk. 1856 (type *australis* Wlk.) placed on Official List of specific Trivial Names, Bull. zool. Nomen. **4** p. 357.—*O. umbraculatus*, *jocosa*, *mimica*, *cervinata*, *copularis*, *despecta*, *signata* see *Philpottia*.

Parahepialiscus gen. n., *baluensis* sp. n. N. Borneo p. 169 figs., VIETTE Bull. Soc. linn. Lyon **19**.

Paraoxycanus gen. n., *novaeguineensis* (type) p. 68, *meeki* p. 69 spp. n. New Guinea; *nigripuncta* Joicey & Talbot, *nigricosta* J. & T. p. 70, *argentipuncta* J. & T., *subochrea* J. & T. p. 71 from *Porina* figs., VIETTE Zool. Meded. **31**.

Pfitzneriella gen. n. for *Triodia remota* Pf. p. 116 figs., VIETTE Bull. Soc. ent. Fr. **55**.

Phassodes further description of ♂ genitalia and scent gland; *vitiensis* Roths. (= *nausori* B.-B.) p. 189 figs., VIETTE Proc. Hawaii. ent. Soc. **14**.

Philaenia omagua see *Pseudophilaenia*.

Philpottia gen. n. for *Oxycanus umbraculatus* Gn. (type), *O. jocosa* Meyr., *O. mimica* Philp., *O. cervinata* Wlk., *O. copularis* M., *O. despecta* W., *O. signata* W. p. 72 figs., VIETTE Zool. Meded. **31**.

Porina Wlk. 1856 (type *novaezealandiae* Wlk.) a rejected name, Bull. zool. Nomen. **4** p. 357.—*P. nigripuncta*, *nigricosta*, *argentipuncta*, *subochrea* see *Paraoxycanus*.

Pseudophassus prosopus Dr. designated type p. 165, VIETTE Bull. Soc. zool. Fr. **75**.

Pseudophilaenia gen. n. for *Philaeenia omagua* Pf. & Gaede (a sp. not form of *lagopus* Möschl.) p. 116 figs., VIETTE Bull. Soc. ent. Fr. **55**.

Roseala gen. n. p. 53, *bourgognei* sp. n. Brazil p. 54 fig., VIETTE Rev. franç. Ent. **17**.

Schaefferiana gen. n. for *Troidia epigramma* H.S. (type) p. 58; *jeanneli* p. 59, *biedermannii* p. 60 spp. n. Brazil figs., VIETTE t.c.

Triodia remota see *Pfitzneriella*; *epigramma* see *Schaefferiana*.

MICROPTERYGIDAE.

Micropteryx emiliensis sp. n. France p. 135 figs., VIETTE Bull. Soc. ent. Fr. **55**.

TRICHOPTERA.

Trichoptera of Dallas County, Texas, HALL Field & Lab. **18** pp. 165–177, 14 figs.

Larvae of British Trichoptera, 28–31, HICKIN Proc. R. ent. Soc.

Lond. (A) **25** pp. 67–70, 12 figs., 71–74, 8 figs., 103–106, 9 figs., 107–110, 11 figs.

Indian caddis flies, I–III, KIMMINS Ann. Mag. nat. Hist. (12) **3** pp. 590–603, 7 figs., 696–705, 4 figs., 905–934, 71 figs.

Indian caddis flies, pt. XI, MOSELY J. Bombay n. H. Soc. **48** pp. 782–791, 13 pls.

RHYACOPHILIDAE.

Agapetus orosus sp. n. California p. 116 fig., DENNING J. Kans. ent. Soc. **23**.

Atopsyche sp. larva with chelate front leg p. 62 figs., HINTON Proc. R. ent. Soc. Lond. (A) **25**.

Hyperrhyacophila subgen. n. (type *torrentium* Pict.) see *Rhyacophila*.

Hyporhyacophila subgen. n. see *Rhyacophila*.

Metarhyacophila subgen. n. see *Rhyacophila*.

Pararhyacophila subgen. n. (type *intermedia* McL.) see *Rhyacophila*.

Prosrhyacophila subgen. n. (type *laevis* Pictet) see *Rhyacophila*.

Rhyacophila (*Hyperrhyacophila*, *Pararhyacophila*, *Prosrhyacophila*, *Metarhyacophila*, *Hyporhyacophila* subgen. n. p. 272); key to larvae of subgen. *Hyporhyacophila* p. 275; distribution of spp. in Central Europe pp. 276–290; (*R.*) *dorsalis* group p. 277, (*R.*) *fasciata* group p. 280 systematic notes, DÖHLER Arch. Hydrobiol., Stuttgart **44**.—*R. tucula* U.S.A., Br. Columbia, *willameta* p. 261, *kernada* U.S.A., *milnei* Alberta p. 264 spp. n.; *alberta* Banks (= *mirus* Denn.) p. 261 figs., Ross J. Wash. Acad. Sci. **40**.—*R. chilensis* Alberta, *alexanderi* p. 115, *sequoia* p. 116 U.S.A. spp. n. figs., DENNING J. Kans. ent. Soc. **23**.—*R. latitergum* sp. n. Washington p. 448 figs., DAVIS Ann. ent. Soc. Amer. **42**.—*R. davao* sp. n. Mindanao p. 132 figs., Ross Ent. News **61**.

PHILOPOTAMIDAE.

Chimarra primula p. 100, *beameri* p. 101 spp. n. U.S.A.; *moseleyi* Denn. (= *perigua* Ross) p. 102 figs., DENNING Bull. Brooklyn ent. Soc. **45**.

Philopotamus Steph. *montanus* Don. designated type as *scopulorum* Leach not valid p. 59, KIMMINS Entomologist **83**.

Stenopsyche ulmeriana sp. n. Congo & Ruanda p. 207, larva p. 211, nymph p. 214 figs., MARLIER Bull. Ann. Soc. ent. Belg. **86**.

Wormaldia thyria sp. n. N. Carolina p. 98, DENNING Bull. Brooklyn ent. Soc. **45**.

PSYCHOMYIDAE.

Anticyra Curt. *gracilipes* Curt. designated type as *phaeopa* Steph. not valid p. 58, KIMMINS Entomologist **83**.—See *Psychomyia*.

Psychomyia Latr. (= *Anticyra* Curt.) p. 58, KIMMINS Entomologist **83**.

Tinodes key to Nearctic spp. p. 64; provo p. 66, *sigodana* p. 67 spp. n. U.S.A. figs., Ross & MERKLEY J. Kans. ent. Soc. **23**.—*T. belisa* p. 118, *parvula* p. 119 spp. n. U.S.A. figs., DENNING J. Kans. ent. Soc. **23**.—*T. pallidula* larva p. 103 figs., HICKIN Proc. R. ent. Soc. Lond. (A) **25**.

POLYCENTROPODIDAE.

Cyrnus flavidus larva p. 22 figs., MACDONALD Proc. R. ent. Soc. Lond. (A) **25**.

Nyctiophylax zelenus sp. n. Texas p. 99, DENNING Bull. Brooklyn ent. Soc. **45**.

Plectrocnemiella carelica sp. n. Finland p. 39 fig., NYBOM Notul. ent. **30**.

Polycentropus gertschi sp. n. Arizona p. 100, DENNING Bull. Brooklyn ent. Soc. **45**.

HYDROPSYCHIDAE.

Arctopsyche californica Ling (= *divergens* Bks.) p. 97, DENNING Bull. Brooklyn ent. Soc. **45**.

HYDROPTILIDAE.

Agraylea Curt. (= *Hydrorchestria* Kol.) p. 59, KIMMINS Entomologist **83**.

Hydrorchestria Kol. *sexmaculata* Curt. designated type p. 58, KIMMINS t.c.—See *Agraylea*.

Oxyethira simplex larva p. 25 figs., MACDONALD Proc. R. ent. Soc. Lond. (A) 25.

Stactobia systematic notes p. 294; *caspersi* sp. n. Bulgaria p. 296; key to European spp. ♂♂ p. 299, ULMER Arch. Hydrobiol. 44.

PHRYGANEIDAE.

Key to Indian genera of Phryganeidae, KIMMINS Ann. Mag. nat. Hist. (12) 3 p. 697.

Eubasilissa Mart. (= *Oopterygia* Mart.) p. 697, KIMMINS Ann. Mag. nat. Hist. (12) 3.

Oopterygia see *Eubasilissa*.

Phryganopsis latipennis subsp. n. *elongatus* Assam p. 700, *sikkimensis* Sikkim p. 702, *praecisus*; *cornutus* sp. n. Burma p. 704 figs., KIMMINS Ann. Mag. nat. Hist. (12) 3.

LIMNEPHILIDAE.

Key to Indian genera of Limnephilidae, KIMMINS Ann. Mag. nat. Hist. (12) 3 p. 929.

Allomyia stylata see *Imania tri-punctata*.

Anabolia revision of spp. pp. 300-339; *nervosa* Curt. (= *n. varr. putoni* McL., *excisa* McL.) p. 308; *soror* McL. (= *sororcula* McL.) p. 311; *lombarda* Ris (= *furcata* McL.) p. 314 figs., SCHMID Schweiz. Z. Hydrobiol. 12.

Anisogamus McL. *diformis* McL. designated type p. 58, KIMMINS Entomologist 83.

Antarctoecia nordenskioeldi ♂ p. 594 figs., SCHMID Acta zool. lilloana 8 1949.

Apatania characters p. 402, NIELSEN Ent. Medd. 25.

Apitelina characters p. 918; *tenuis* p. 920, *moselyi* p. 922, *falcatus* p. 923 spp. n. Burma figs., KIMMINS Ann. Mag. nat. Hist. (12) 3.

Apatidea extensus Assam p. 930, *malaisei* Burma p. 932 spp. n. figs., KIMMINS t.c.—*A.* characters p. 402; *muliebris* ♀ p. 386; *cimbrica* p. 387, *intermedia* p. 396 spp. n. Jutland figs., NIELSEN Ent. Medd. 25.—*A. ulmeri* sp. n. China p. 54 figs., SCHMID Mitt. schweiz. ent. Ges. 23.

Aplatophylax gen. n. p. 908, *mishmicus* (type) p. 909, *steeleae* p. 912, *cristatus* p. 914, *erectus* p. 916 spp. n. Assam figs., KIMMINS Ann. Mag. nat. Hist. (12) 3.

Astenophylax argus, *grammicus*, *soldatovi* see *Hydatophylax*.

Asynarchus cinnamoneus sp. n. Vancouver I. p. 48 figs., SCHMID Mitt. schweiz. ent. Ges. 23.

Australomyia gen. n. for *Limnophilus meridionalis* Ulm. (type) & others p. 600 figs., SCHMID Acta zool. lilloana 8 1949.

Colpotaulius Kol. *excisus* Kol. designated type as *incisus* Curt. not valid p. 58, KIMMINS Entomologist 83.

Cryptochia gen. n. for *Parachiona pilosa* Bks. p. 425, ROSS Amer. Midl. Nat. 43.

Dicosmoecus aureoventris sp. n. Washington p. 449 figs., DAVIS Ann. ent. Soc. Amer. 42.

Drusus discophorus p. 184, *plicatus* p. 186 spp. n. Macedonia figs., RADOVANOVIC Zool. Anz. 140 1942.

Ecclisomyia key to Nearctic spp. p. 423, ROSS Amer. Midl. Nat. 43.

Farula malkini sp. n. Oregon p. 421 fig., ROSS t.c.

Grammotaulius monograph pp. 317-352 figs., SCHMID Rev. suisse Zool. 57.

Halesochila and *taylori* re-descriptions p. 55 figs., SCHMID Mitt. schweiz. ent. Ges. 23.

Hydatophylax characters p. 266; *argus* Harr. p. 272, *grammicus* McL. p. 279, *soldatovi* Mart. p. 282 from *Astenophylax*; *nigrovittatus* McL. p. 284, *variabilis* Mart. p. 287 from *Platyphylax*; *magnus* Mart. from *Stenophylax* p. 291; *hesperus* Bks. from *Pycnopsyche* p. 294; *argulus* U.S.A. p. 276, *spartacus* Siberia p. 290 spp. n. figs., SCHMID t.c.—*H. victor* sp. n. Maine p. 72 figs., BANKS Psyche 57.

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Limnophilus conerus Canada, U.S.A. p. 426, (a synonym of *batchawana* Denn. p. 426, note), *adapus* Texas p. 429 spp. n., Ross t.c.—*L. (Limnophilus) insularis* sp. n. Vancouver I. p. 47 figs., SCHMID Mitt. schweiz. ent. Ges. 23.—*L. (Limnophilus) meridionalis* & others see *Australomyia*.

Notania gen. n. (MOSELEY), *brunneaa* (MOSELEY) (type) Assam p. 925, *penicillata* (K.) Burma p. 927 spp. n. figs., KIMMINS Ann. Mag. nat. Hist. (12) 3.

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Stenophylax Kol. *striatus* Kol. designated type p. 59, KIMMINS Entomologist 83.—*S. vibex* larva p. 107 figs., HICKIN Proc. R. ent. Soc. Lond. (A) 25.—*S. magnus* see *Hydatophylax*.

LIMNOCENTROPIDAE.

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Goerodina further description p. 785; *dubitans*, *serrata* (type) spp. n. Assam p. 786 figs., MOSELEY t.c.

Kodala further description; *lanca* sp. n. Palnis p. 790 figs., MOSELEY t.c.

Oecismus McL. *mucidus* McL. designated type p. 59, KIMMINS Entomologist 83.

Paraphlegopteryx brunneus p. 787, *rufus* p. 789 N.E. Burma, *normalis* Darjeeling p. 788 spp. n. figs., MOSELEY J. Bombay n. H. Soc. 48.

NEUROPTERA.

Neuroptera of Air, Fr. Sudan, FRASER Mém. Inst. franç. Afr. noire no. 10 pp. 114–126, 8 figs.

Neuroptera of Siwa Oasis, Libyan Desert, Expedition 1935, KIMMINS Bull. Soc. Fouad 1er Ent. 34 pp. 154–157.

MYRMELEONIDAE.

Myrmeleonids of France, BERLAND Entomologiste 5 pp. 150–151.

Characters of Myrmeleontinae, MATHEWS W. Aust. Nat. 2 pp. 64–66, 4 figs.

Creoleon pallida sp. n. Fr. Sudan p. 124 fig., FRASER Mém. Inst. franç. Afr. noire no. 10.

Cuetia nubicus sp. n. Fr. Sudan p. 119 fig., FRASER t.c.

Formicaleon aridus, *tipuloides* spp. n. Fr. Sudan p. 122 fig., FRASER t.c.

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Palpares zebroides sp. n. Fr. Sudan p. 116 fig., FRASER t.c.

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Dixonotus gen. n., *van-somereni* sp. n. Kenya p. 244 figs., KIMMINS t.c.

Proctarrelabis kenyana p. 247, *neavei* p. 251 spp. n. Kenya figs., KIMMINS t.c.

ITHONIDAE.

Oliarces clara further description p. 137, ADAMS Pan-Pacif. Ent. 26.

HEMEROBIIDAE.

Preliminary list of Hemerobiidae of Iowa, ORMAN & JAQUES Proc. Iowa Acad. Sci. 56 1949 p. 377.

Hemerobius L. 1758 previous type selections rejected and *humulinus* L. designated type, Bull. zool. Nomen. 4 p. 396.

Sisyra sp. larva p. 202 figs., GRIMALSCHI Zool. Anz. 130 1940.

CONIOPTERYGIDAE.

Helicconis salti sp. n. Ruwenzori p. 167 figs., KIMMINS Ann. Mag. nat. Hist. (12) 3.

CHRYSOPIDAE.

Chrysopa Leach 1815 previous type selections rejected and *perla* L. designated type, Bull. zool. Nomen. 4 p. 396.—*C. scelestes* early stages pp. 178–181 figs., MAQSUD NASIR Indian J. Ent. 9.—*C. pinalena*, *yuma* p. 49, *clarivena* p. 50 spp. n. U.S.A. figs., BANKS Psyche 57.

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MECOPTERA.

Mecoptera records from Tennessee, COLE & GILLESPIE J. Tenn. Acad. Sci. 25 pp. 84–85.

Bittacus planus sp. n. Shensi p. 158 figs., CHENG Psyche 56.

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DIPTERA.

Diptera of Bristol (contd.), Cyclorrhapha, AUDCENT Proc. Bristol Nat. Soc. 28 pp. 45–132.

Some Diptera from Utsjoki, Finnish-Lapland, FREY Notul. ent., Helsinki 30 pp. 5–18, 1 fig.

Second supplement to check list of Netherlands Diptera, DE MEIJERE Tijdschr. Ent. 92 pp. 1–14, 2 figs.

Catalogue of Diptera of New Zealand sub-region, MILLER Bull. Dep. sci. industr. Res. N.Z. no. 100 (Ent. Res. Sta. Publ. no. 5) 194 pp. 1 pl. 1 map.

Monograph of the biology of Diptera, SÉGUY Encycl. ent. (A) 26 609 pp. 10 pls. (7 col.) 225 figs.

Diptera of Aïr, Fr. Sudan, SÉGUY Mém. Inst. franç. Afr. noire no. 10 pp. 272–282.

Diptera of Romagna, pt. 2, ZANGHERI Mem. Soc. ent. ital. 29 pp. 68–95.

CECIDOMYIIDAE (ITONIDAE).

Amraemyia gen. n. p. 33, *viridigallincola* (type) p. 34, *amraemyia* p. 37, *brunneigallincola* p. 39 spp. n. India figs., RAO Indian J. Ent. 10.

Clinodiplosis biorrhizae early stages p. 101 figs., NIJVELDT Ent. Ber., Amst. 13.

Contarinia nasturtii Kieff. (= *torquens* de Meij., *geisenheyneri* Rübs.) discussed pp. 241–248, BARNEs Ann. appl. Biol. 37.

Lasioptera asterspinosae sp. n. Texas p. 67 figs., WHITE Univ. Texas Publ. no. 5007.

Mayetiola secalis sp. n. Bavaria p. 44 figs., BOLLOW Pflanzenschutz 2.

Oligotrophus pattersoni sp. n. U.S.A. p. 72 figs., WHITE Univ. Texas Publ. no. 5007.

MYCETOPHILIDAE (FUNGIVORIDAE).

Ceroplatinae of Neotropical Region, LANE Dusenia 1 pp. 32–69, 22 figs., 139–144, 4 figs.

Aphrastomyia cramptoni type locality Brazil p. 283, LANE & COHER Rev. brasili. Biol. 10.

Apyrtula see *Platyura* (*Tylparua*).

Ceroplatus (*C.*) *caribai* Panama p. 40, (*Cerotelion*) *boracensis* p. 42, (*Neoceroplatus*) *paicoenai* p. 43, (*Placeratias*) *uaracui* p. 46 Brazil spp. n.; (*P.*) *longimanus* ♀ p. 45 figs., LANE Dusenia 1.

Epicypta punctum see *Neoepicypta*.

Heteropterna ghesquièrei sp. n.
Belg. Congo p. 35, TOLLET Bull.
Ann. Soc. ent. Belg. 86.

Leia fisherae sp. n. Brazil p. 113
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L. paulensis p. 121, *paranensis* p. 122,
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Messala miki p. 281, *austriaca* p.
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naturh. Mus. Wien 57.

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Ent., Rio de J. 21.

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Inst. Sci. nat. Belg. 26 no. 24.

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SHAW F. R. & M. M. Bull. Brooklyn
ent. Soc. 45.

BIBIONIDAE, SCATOPSIDAE.

Bibionidae of Parc national Albert,
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Bibio revision of African spp. pp.
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ANISOPODIDAE

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British Anisopodidae, FREEMAN Handb. Ident. Br. Ins. **9** pt. 2 pp. 70–72, 6 figs.

SIMULIIDAE.

Australasian Simuliidae, II, MACKERRAS, M. J. & I. M. Proc. Linn. Soc. N.S.W. **75** pp. 167–187, 15 figs.

Simuliidae of Minnesota, NICHOLSON & MICKEI Tech. Bull. Minn. agric. Exp. Sta. no. 192, 64 pp. 32 figs.

Austrosimulium fulvicorne sp. n. Queensland p. 184 figs., MACKERRAS, M. J. & I. M. Proc. Linn. Soc. N.S.W. **75**.

Cnephia key to spp. of *aurantiacum* group p. 168; *tonnoiri* subsp. n. *orientalis*; *strenua* sp. n. Queensland p. 170 figs., MACKERRAS, M. J. & I. M. t.c.

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Odagmia kondici see *Simulium bezzii*.

Simulium key to Australasian spp. p. 173; *peregrinum* p. 175, *aureonigrum* p. 178, *inornatum* p. 181 spp. n. Queensland figs., MACKERRAS, M. J. & I. M. Proc. Linn. Soc. N.S.W. **75**.—*S. pertinax* re-described p. 193, early stages p. 207 figs., d'ANDRETTA, C. & M. A. V. Papéis avulsos Dep. Zool. S. Paulo **9**.—*S. (S.) microbranchium* p. 538, (*Eusimulium*) *aguirrei* p. 544, (*Dyarella*) *yepocapense* p. 548 spp. n. Guatemala figs., DALMAT Ann. ent. Soc. Amer. **42**.—*S. (Dyarella) delatorrei* p. 137, (*Hearlea*) *ethelae* p. 143, (*H.*) *nigricornis* p. 148 spp. n. Guatemala figs., DALMAT op. cit. **43**.—*S. merops*, *natalensis* p. 14, *narcaeus* p. 16 spp. n. S. Africa figs., DE MEILLON Proc. R. ent. Soc. Lond. (B) **19**.—*S. rodhaini* p. 101, *duboisii* p. 104, *aurelianii* p. 106, *ngabogei* p. 108, *jadini* p. 112, *akanyaruensis* p. 113, *ruandae* p. 115, *vulcani* p. 118 (with var. n. *fuscicornis* p. 121)

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CERATOPOGONIDAE.

Key to genn. of French Ceratopogonids, HARANT Entomologiste **5** pp. 158–160, 1 fig.

List of Ceratopogonids of America (key to spp. of Venezuela p. 359), IRIARTE Bol. Lab. Clin. "Luis Razetti" **15** pp. 396–398.

List of Ceratopogonidae of Lunz lakes, THIENEMANN Arch. Hydrobiol. Stuttgart Suppl. **18** pp. 165–171 figs.

Culicoides key to European ♀♀ p. 32 fig., ZILAHY-SEBESS Folia ent. hung. **6** 1941.—C. of Porto Rico p. 342, FOX & KOHLER P.R.J. publ. Hlth **25**.—*C. lichyi* sp. n.

Venezuela p. 69; list of Venezuelan spp. p. 71 fig., FLOCH & ABONNENC Bol. Ent. venezol. **8**.—*C. guttatus* Coq. (= *insignis* Lutz, *coutinhoi* Barr., *inamollae* Fox & Hoffm.) characters p. 116, LANE Bol. Ent. venezol. **8**.—*C. guadeloupensis* sp. n. Guadeloupe p. 2 figs., FLOCH & ABONNENC Publ. Inst. Pasteur Guyane Terr. Inini no. 203.

Dasyhelea lithotelmatica sp. n. Austria p. 178 figs., STRENZKE in THIENEMANN Arch. Hydrobiol. Stuttgart Suppl. **18**.—*D. franzella* sp. n. Austria p. 3 fig., GOETGHEBUER Bull. Inst. Sci. nat. Belg. **26** no. 47.

Forcipomyia attonsa sp. n. Belgium p. 1; *pulchrithorax* hypopygium figured p. 2 figs., GOETGHEBUER t.c.

Lasiohelea danaisi sp. n. Venezuela p. 72 figs., FLOCH & ABONNENC Bol. Ent. venezol. **8**.

Leptoconops of S. France pp. 240–242; characters of ♀♀ p. 241, HARANT & BRUNEL Vie et Milieu **1**.

CHIRONOMIDAE.

British Chironomidae, COE Hand. Ident. Br. Ins. **9** pt. 2 pp. 121–205, 20 figs.

List of Chironomidae of Bas-Escaut region, Belgium, GOETGHEBUER Bull. Ann. Soc. ent. Belg. **86** pp. 143–163.

Tanypodinae of Iowa, III, MORRISSEY Amer. Midl. Nat. **43** pp. 88–91, 4 figs.

List of Chironomidae of Lunz lakes, THIENEMANN Arch. Hydrobiol., Stuttgart Suppl. **18** pp. 110–165 figs.

Ablabesmyia atrocincta pupa p. 192 figs., THIENEMANN Zool. Anz. **142** 1943.

Chironomus tenuicaudatus sp. n. Belgium p. 3 figs., GOETGHEBUER Bull. Inst. Sci. nat. Belg. **26** no. 47.

Clinotanypus thoracicus early stages p. 89, MORRISSEY Amer. Midl. Nat. **43**.

Clunio brasiliensis sp. n. Brazil p. 494 figs., DE OLIVEIRA Rev. brasil. Biol. **10**.

Cricotopus elegans p. 88, *flavipes* p. 90 early stages, BERG Ecol. Monogr. **20**.

Demeijerea rufipes early stages p. 28 figs., WUNDSCHE Zool. Anz. **141** 1943.

Diamesa (Psilodiamesa) admontensis p. 6, (*P.*) *austriaca* p. 7 spp. n. Austria figs., GOETGHEBUER Bull. Inst. Sci. nat. Belg. **26** no. 47.—*D. latitarsis* hypopygium p. 204 figs., THIENEMANN Arch. Hydrobiol., Stuttgart Suppl. **18**.

Diplocladius (Orthocladius) lunensis sp. n. Austria p. 101 figs., GOWIN & THIENEMANN Zool. Anz. **140** 1942.

Euphaenocladius strenzkei Goetgh. from *Pseudosmittia* p. 260, STRENZKE Arch. Hydrobiol., Stuttgart Suppl. **18**.

Glyptotendipes (G.) dreisbachi early stages p. 94, BERG Ecol. Monogr. **20**.

Heterotrissocladius scutellatus early stages p. 196 figs., THIENEMANN Zool. Anz. **142** 1943.

Limnophyes algerina sp. n. Algeria p. 277 fig., MARCUZZI Ann. naturh. Mus. Wien **57**.—*L. trigonus* sp. n. Austria p. 14 fig., GOETGHEBUER Bull. Inst. Sci. nat. Belg. **26** no. 47.—*L. flexuulus* imago p. 101, larva p. 105 figs., STRENZKE Zool. Anz. **145**.

Metroclemens montanus sp. n. Austria p. 8 fig., GOETGHEBUER Bull. Inst. Sci. nat. Belg. **26** no. 47.—*M. atratulus* subsp. n. *corticalis* Austria p. 235 figs., STRENZKE Arch. Hydrobiol., Stuttgart Suppl. **18**.—*M. scirpi* all stages p. 142 etc., systematic position p. 148; *inopinatus* sp. n. Schleswig-Holstein p. 157, early stages p. 159 etc. figs., STRENZKE Arch. Hydrobiol., Stuttgart **44**.—*M. algerinus* sp. n. Algeria p. 275 fig., MARCUZZI Ann. naturh. Mus. Wien **57**.

Micropsectra zernyi Algeria p. 273, *andalusiaca* Andalusia, *miki* Italy p. 274 spp. n. figs., MARCUZZI t.c.

Orthocladius algerinus sp. n. Algeria p. 276 fig., MARCUZZI t.c.

Parametriocnemus boreoalpinus sp. n. Austria p. 105 figs., GOWIN & THIENEMANN Zool. Anz. **140** 1942.

Paraphaenocladius impensus subsp. n. *monticola* p. 211; *pseudirrititus* sp. n. p. 216 Austria; key to early stages p. 227 figs., STRENZKE Arch. Hydrobiol., Stuttgart Suppl. **18**.

Parasmittia gen. n. p. 328, *carinata* sp. n. Austria p. 270, early stages p. 274 figs., STRENZKE t.c.

Paratrichocladius holsatus early stages p. 205, THIENEMANN Zool. Anz. 139 1942.

Pentaneura planensis pupa p. 88 fig., MORRISSEY Amer. Midl. Nat. 43.

Polypedilum (P.) illinoense p. 91, (*P.*) *ophioides* p. 92, (*Pentapedilum*) *sorbens* p. 96 early stages, BERG Ecol. Monogr. 20.

Procladius culiciformis, choreus distinguishing characters p. 90, MORRISSEY Amer. Midl. Nat. 43.

Psectrocladius bisetus early stages p. 194 figs., THIENEMANN Zool. Anz. 142 1943.

Pseudosmittia brevicornis p. 281, *triplex* p. 301, *virgo* (with subsp. n. *montana*) p. 303 spp. n. Austria; *holsata* ♀ p. 287 figs., STRENZKE Arch. Hydrobiol., Stuttgart Suppl. 18.—*P. strenzkei* see *Euphaenocladius*.

Rheorthocladius majus early stages p. 195 figs., THIENEMANN Zool. Anz. 142 1943.

Smittia schmöllerii p. 11, *schmöllerella* p. 12, (*Pseudosmittia*) *avicularia* Austria, *davidi* France p. 13 spp. n. figs., GOETGHEBUER Bull. Inst. Sci. nat. Belg. 26 no. 47.—*S. algerina* sp. n. Algeria p. 278 fig., MARCUZZI Ann. naturh. Mus. Wien 57.

Tanypus stellatus pupa p. 90, MORRISSEY Amer. Midl. Nat. 43.

Tanytarsus (Cladotanytarsus) lewisi sp. n. Sudan p. 58 fig., FREEMAN Proc. R. ent. Soc. Lond. (B) 19.—*T. alpicola, semidepilatus* spp. n. Austria p. 5 figs., GOETGHEBUER Bull. Inst. Sci. nat. Belg. 26 no. 47.

Telmatogeton list of known spp. p. 467; *atlanticum* p. 470, *nanum* p. 472 spp. n. Brazil figs., DE OLIVEIRA Mem. Inst. Osw. Cruz 48.

Trichocladius hyemalis France p. 9, *caliginosus* Austria p. 10 spp. n. figs., GOETGHEBUER Bull. Inst. Sci. nat. Belg. 26 no. 47.

Zavrelia nigritula early stages p. 197, systematic notes p. 198 figs., THIENEMANN Zool. Anz. 142 1943.

CULICIDAE.

List of mosquito larvae of Panama, ARNETT J.N.Y. ent. Soc. 58 pp. 105–108.

Annotated list of mosquitos of New York, BARNES, FELLTON & WILSON Mosq. News 10 pp. 69–84.

Revised nomenclature for chaetotaxy of mosquito larva, BELKIN Amer. Midl. Nat. 44 pp. 678–698, 8 figs.

Lists of species and varietal names of mosquitos of Ceylon, CARTER Ceylon J. Sci. (B Zool.) 24 pp. 85–115.

Culicids from Formosa, CHOW Quart. J. Taiwan Mus. 3 pp. 281–287, 4 figs.

List of Culicines of Madagascar, DOUCET Mém. Inst. sci. Madagascar 4A pp. 61–64.

List of mosquitos of Argentina, DURET Rev. Soc. ent. argent. 14 pp. 297–318.

British Culicidae (Dixinae, Chaboninae), FREEMAN Handb. Ident. Br. Ins. 9 pt. 2 pp. 97–101, 7 figs.; (Culicinae), MATTINGLY t.c. pp. 102–120, 15 figs.

Mosquitos of Middle Congo, GRJEBINE Bull. Inst. Etud. centrafr. N.S. no. 1 pp. 25–48.

Annotated list of mosquitos from Colorado, HARMSTON Gt. Basin Nat. 9 pp. 65–75.

Anophelines of Fr. Equat. Africa, HOLSTEIN Dir. gén. Santé publ. A.O.F. 1949 55 pp. 10 pls.

Classification, morphology and identification of the Anophelines of Surinam, VAN DER KUYP Meded. K. Ver. indisch Inst., Amsterdam no. 89 pp. 39–98.

Culicidae of Argentina, Bolivia & Paraguay, MARTÍNEZ Publ. Mis. Estud. Pat. reg. Argent. no. 78 pp. 33–41, 4 figs.

Anophelines of Paraguay, RACHOU, RICCIARDI & GUEDES Rev. brasil. Malariol. 2 pp. 231–233.

Keys to genera and species of mosquito larvae of W. Canada, REMPEL Canad. J. Res. 28 (D) pp. 207–248, 43 figs.

Illustrated map of Anopheline imagines of Indonesia (English translation), STOKER & KOESOEMAWIN-ANGOEN 1949 69 pp.

Taxonomic study of Mexican Anophelines, VARGAS & MARTÍNEZ PALACIOS Estud. taxon. Mosq. Anofel. Mexico 143 pp. 62 figs.

Aedes larvae of some Californian snow spp. pp. 111-118, BOHART Pan-Pacif. Ent. 26.—*A.* (*Finlaya*) *argyrothorax* all stages p. 173 figs., CERQUEIRA Proc. ent. Soc. Wash. 52.—*A.* (*Finlaya*) *sinensis* sp. n. Formosa p. 283 figs., CHOW Quart. J. Taiwan Mus. 3.—*A.* (*Skusea*) *cachani* sp. n. Madagascar p. 45 figs., DOUCET Mém. Inst. sci. Madagascar 4A.—*A.* (*Stegomyia*) *ruwenzori* sp. n. Uganda p. 281 fig., HADDOW & VAN SOMEREN Ann. trop. Med. Parasit. 44.—*A.* (*Ochlerotatus*) *pullatus* genitalia p. 109 figs., JOHNSON & THURMAN Pan-Pacif. Ent. 26.—*A.* (*A.*) *seculatus* sp. n. Travancore p. 139 fig., MENON Proc. R. ent. Soc. Lond. (B) 19.—*A.* *japonicus* p. 170, *esoensis* p. 174 larvae figs., MONCHADSKÝ Parasit. Sborn. 9 1948.—*A.* (*Stegomyia*) *strelitziae* sp. n. Natal p. 73; (*Aëdimorphus*) *beviri* characters p. 78 figs., MUSPRATT J. ent. Soc. sthn Afr. 13.—*A.* (*Finlaya*) *luteostriatus* sp. n. N. Rhodesia p. 81 fig., ROBINSON J. ent. Soc. sthn Afr. 13.—*A.* *bambusicolus* ♀, larva, pupa p. 80 figs., ROSS J. Wash. Acad. Sci. 40.—*A.* *koreicoides* sp. n. Japan p. 627 figs., SASA, KANO & HAYASHI Jap. J. exp. Med. 20.—*A.* revision of Japanese spp. of subgen. *Aedes* pp. 631-640; (*A.*) *yamadai* p. 635, (*A.*) *asanumai* p. 637 spp. n. Japan figs., SASA, KANO & TAKAHASI Jap. J. exp. Med. 20.—*A.* (*Aëdimorphus*) *ngong* sp. n. Kenya p. 7; (*A.*) *stokesi*, (*A.*) *haworthi* variations p. 9; (*Aëdimorphus*) *smithburni* p. 39, (*A.*) *semlikiensis* p. 40 spp. n. Uganda; (*Aëdimorphus*) *mutilus* larva, pupa p. 65; (*A.*) *tricholabis* subsp. n. *bwamba* Uganda p. 67 figs., VAN SOMEREN Proc. R. ent. Soc. Lond. (B) 19.—*A.* (*Ochlerotatus*) *bicristatus* sp. n. California p. 239; discussion on affinities of larva and male terminalia of Group H pp. 244-249 figs., THURMAN & WINKLER Proc. ent. Soc. Wash. 52.—*A.* taxonomic status of subgenn. discussed p. 61, key to American subgenn. p. 64; *Downsiomyia* subgen. n. p. 63; subgen. *Ochlerotatus* (= *Kompi* Aitk.); *pureipes* male genitalia p. 64 fig., VARGAS Rev. Inst. Salub. Enferm. trop. Mexico 11.—*A.* key to ♂♂ of American subgenn. p. 149; (*Culicelsa* Felt a valid subgen. p. 150); (*C.*) *taeniorhynchus* Wied., (*C.*) *mitchellae* Dyar, (*C.*) *nigromaculis* Ludlow, (*C.*) *sollicitans* Theo. from subgen. *Ochlerotatus* p. 151, keys p. 152; (*Pseudoculex* Dyar a valid subgen. p. 153); (*P.*) *aurifer* Coq., (*P.*) *pullatus* Coq., (*P.*) *diantaeus* H. D. & K., (*P.*) *intrudens* Dyar from subgen. *Ochlerotatus*, keys p. 154; (*Kummyia* subgen. n. p. 155), (*K.*) *serratus* Theo., (*K.*) *atlanticus* Dyar & Knab, (*K.*) *tormentor* D. & K., (*K.*) *oligopistus* Dyar, (*K.*) *hastatus* Dyar, (*K.*) *eucephalaeus* Dyar, (*K.*) *dupreei* Coq. from subgen. *Ochlerotatus* p. 156, keys p. 157, VARGAS Rev. Soc. mex. Hist. nat. 11.—*A.* (*Ochlerotatus*) *shannoni* p. 161, (*Gualteria*) *ramirezi* p. 164, (*G.*) *kompi* p. 167 spp. n. Mexico figs., VARGAS & DOWNS Rev. Soc. mex. Hist. nat. 11.—*A.* spp. specific characters in tarsal claws pp. 160-162 figs., VOCKEROTH Canad. Ent. 82.

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Phlebotomus Rond. 1840 (*Flebotomus* rejected) (type *papatasi* Scop.) placed on Official List, Bull. zool.

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Fr. Guiana p. 1 figs., ABONNENC & CHASSIGNET Publ. Inst. Pasteur Guyane Terr. Inini no. 167 1948.—*P. (Flebotomus) serranus* sp. n. Brazil p. 843 figs., DAMASCENO & AROUCK Rev. Serv. Saúde públ., Rio de J. **2** [? 1950].—*P. (F.) digitatum* sp. n. Bahia p. 465 figs., DAMASCENO & AROUCK op. cit. **3**.—[*P.*] *Flebotomus* distribution 1942–45 Amazonas and Pará States pp. 817–842 maps, DAMASCENO, AROUCK & CAUSEY Rev. Serv. Saúde públ., Rio de J. **2** 1949 [? 1950].—*P.* West Indian spp. pp. 405–417, key; *christophaei* Dominican Republic, Haiti p. 409, *orestes* p. 410, *cubensis* p. 414 Cuba, *duppuyorum* p. 412 spp. n.; *cayennensis* subspp. n. *jamaicensis* p. 414 Jamaica, *hispaniolae* Dominican Republic, Haiti p. 415 figs., FAIRCHILD & TRAPIDO Ann. ent. Soc. Amer. **43**.—*P. venezuelensis* p. 77, *zuliaensis* p. 85 spp. n. Venezuela; *atrocavatus* p. 80, *evansi* p. 87, *cayennensis* p. 91, *baduelensis* p. 95 further descriptions figs., FLOCH & ABONNENC Bol. Ent. venezol. **8**.—*P. cayennensis* ♀ p. 1 figs., FLOCH & ABONNENC Publ. Inst. Pasteur Guyane Terr. Inini no. 166 1948.—*P. roubaudi* var. n. *fourtoni* Upper Volta p. 1 figs., FLOCH & ABONNENC op. cit. no. 169 1948.—*P. lichyi* sp. n. Venezuela p. 1 figs., FLOCH & ABONNENC op. cit. no. 208.—*P.* two new ♀♀ pp. 1–6 figs., FLOCH & CHASSIGNET Publ. Inst. Pasteur Guyane no. 170 1948.—*P. mascittii* Grassi identity of type, distinct from *perniciosus* p. 454; m. (= *larrousei* Lgn. & Nitz.) synonymy confirmed p. 455 figs., HERTIG Bull. ent. Res. **40**.—*P.* second sternite as taxonomic character pp. 91–95 figs., HERTIG & FAIRCHILD Proc. ent. Soc. Wash. **52**.—*P. (P.) heischi* Kenya, (*Sergentomyia*) *lumsdeni* spp. n.; (*S.*) *congoensis* var. n. *medius* Uganda p. 11 figs., KIRK & LEWIS Proc. R. ent. Soc. Lond. (B) **19**.—(*P.*) *Flebotomus* of north-eastern Brazil, I, DE LUCENA An. Soc. Biol. Pernambuco **9** 1949 pp. 27–36, 3 pls. —*P. perfiliwei*, *papatasi*, *perniciosus* early stages, key pp. 43–54 figs., SACCA Riv. Parassit. **11**; also in R.C. Ist. sup. Sanita **13** pp. 680–688 3 pls. 6 figs.—*P.* of Serbia pts. i–v,

SIMIĆ & others & ZHIVKOVIC Glas srpske Akad. Nauka, Odjel. med. Nauka **194** 1949 pp. 151–181; **195** pp. 27–31, 33 etc. [in Serbian].—*P. squamirostris* in Japan pp. 12–16 figs., SINODA Trans. Kansai ent. Soc. **15** pt. 2.

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British Trichoceridae, FREEMAN Handb. Ident. Br. Ins. **9** pt. 2 pp. 67–69, 11 figs.

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Pediciini of Swedish Expedition to Burma and Br. India, ALEXANDER Ark. Zool. **42A** no. 2, 21 pp. 19 figs.

Tipulids of Rancho Grande, N. Centr. Venezuela, ALEXANDER Zoologica, N.Y. **35** pp. 33–56, 39 figs.

British Tipulidae, COE Handb. Ident. Br. Ins. **9** pt. 2 pp. 1–66, 30 figs.

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New distribution records of some Nearctic Tabanids, MIDDLEKAUFF & QUATE Pan-Pacif. Ent. 26 pp. 95–96.

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Asilidae of Mexico, CARRERA & D'ANDRETTA Papéis avulsos Dep. Zool. S. Paulo **9** pp. 159–191, 61 figs.

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Liancalus virens early stages p. 205 figs., HINTON J. Soc. Brit. Ent. 3.

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Chromocheilosia subgen. n. (type *bicolor* Shann. & Aub.) see *Cheilosia*.

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Milesia simillima sp. n. Java p. 606, HULL t.c.

Myolepta potens, *luteola* distinguishing characters p. 135, COLLIN J. Soc. Brit. Ent. 3.

Salpingogaster urania sp. n. Peru p. 232, HULL Ent. News 60.

Spilomyia chinense sp. n. Yunnan p. 603, HULL Ann. Mag. nat. Hist. (12) 3.

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Notul. ent., Helsinki 30.—*S. viridiceps* Macq. Australian records probably a sp. of *Xanthogramma* p. 533, PARAMONOV Ann. Mag. nat. Hist. (12) 3.

Volucella lucilia p. 65, *pertinax* p. 67, *ulrica* p. 68, *astarte* p. 70 spp. n. Peru, HULL Bull. Brooklyn ent. Soc. 45.—*V. delila* p. 230, *rhea* p. 232, *gorgon* p. 233 Peru, *beatricea* Ecuador p. 235 spp. n., HULL Rev. Ent., Rio de J. 21.

Xylota probosca sp. n. New Zealand p. 614, HULL Ann. Mag. nat. Hist. (12) 3.

CONOPIDAE.

Catalogue of neotropical Conopidae, ACZÉL Acta zool. lilloana 9 [1951, preprint 1950] pp. 49–84.

Conopidae of Parc nat. Albert, Belg. Congo, VANSCHUYTBROECK Explor. Parc nat. Albert, Miss. de Witte fasc. 70 pp. 23–25.

MUSCOIDEA CALYPTRATA.

List of Muscoidea Calyprata from Hokkaido, Japan, KANO J. exp. Med., Tokyo 20 pp. 823–831, 27 figs.

OESTRIDAE.

Oestrids of Strasbourg zool. Museum, LECLERCQ Bull. Ann. Soc. ent. Belg. 86 pp. 55–56.

Hypoderma keys to eggs, larvae, imagines p. 100, EICHLER Z. Parasitenk. 12 1941.—*H. crossi* Patt., *aegagri* Br. (= *aeratum* Aust.) distinct spp. pp. 223–226 figs., VAN EMDEN Bull. ent. Res. 41.

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Pharyngomyia dzerenae sp. n. Mongolia p. 861 figs., GRUNIN t.c.

Przhevalskiana aenigmatica sp. n. Mongolia p. 863 figs., GRUNIN t.c.

TACHINIDAE.

Classification of Ectophasiina, DUPUIS Bull. Mus. Hist. nat., Paris (2) 22 pp. 590–594.

Larval types of Phasiinae, DUPUIS C.R. 13e Congr. int. Zool. Paris 1948, 1949 pp. 472-473.

Some Iowa Tachinidae, JAQUES Proc. Iowa Acad. Sci. **56** 1949 pp. 363-365.

Puparia of some Indian Tachinidae, III, MATHUR Indian For. Rec. (N.S.) Ent. **8** pp. 1-6, 1 pl.

Criticism of van Emden's Ethiopian Tachinids, MESNIL Bull. Ann. Soc. ent. Belg. **86** pp. 104-114.

Revision of Carceliina of Africa, MESNIL Rev. Zool. Bot. afr. **43** pp. 1-24.

Key to genera of and systematic notes on New World Trichopodini, SABROSKY J. Wash. Acad. Sci. **40** pp. 361-371, 11 figs.

Key to second-stage Tachinid larvae, SMITH & FINLAYSON Canad. J. Res. (D) **28** p. 99.

Cephalic and other characters of Tachinids, with figures of some spp., mostly described by West, WEST Pap. Michigan Acad. Sci. Arts Lett. **34** pt. 2 Zool. pp. 109-117, 4 pls.

Acaulona erythropyga sp. n. Porto Rico p. 370, SABROSKY J. Wash. Acad. Sci. **40**.—*A. tehuantepeca* see *Cylindrophasia*.

Achaetoneura B. & B. (= *Achaetoneuropsis* Townsend) p. 168 figs., DA COSTA LIMA Rev. Chacaras e Quintais **82**.

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Allophorina subtrib. n., scope and characters p. 555, DUPUIS Bull. Mus. Hist. nat., Paris (2) **21**.

Amesiomima gen. n., *fulvella* sp. n. Belg. Congo p. 5, MESNIL Bull. Inst. Sci. nat. Belg. **26** no. 3.

Amphibolia discussed p. 519, key to Australian spp. p. 520; *ignorata*, *campbelli* p. 522, *wilsoni* spp. n. Australia; *albocincta* Mall. from *Rutilia* p. 524, PARAMONOV Ann. Mag. nat. Hist. (12) **3**.

Anacamptomyia pallida var. n. *obscurella* S. & Trop. Africa p. 24, MESNIL Rev. Zool. Bot. afr. **43**.

Archiphania Emd. in Dufouriini not Ocypterini p. 106, MESNIL Bull. Ann. Soc. ent. Belg. **86**.

Billaea (*Homalogaster*) *vitripennis* sp. n. Southern Rhodesia p. 116, MESNIL t.c.

Campogaster exigua adult p. 253, larva p. 255, BERRY & PARKER Proc. ent. Soc. Wash. **52**.

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Ceracia dentata larva p. 100, SMITH & FINLAYSON Canad. J. Res. (D) **28**.

Clytiophasia gen. n. for *Phasia sola* Rond. p. 594, DUPUIS Bull. Mus. Hist. nat., Paris (2) **22**.

Cylindrophasia tehuantepeca Twns. from *Acaulona* p. 367, SABROSKY J. Wash. Acad. Sci. **40**.

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Dinera crassipalpis sp. n. Southern Rhodesia p. 115, MESNIL Bull. Ann. Soc. ent. Belg. **86**.

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Ectophasiina subtrib. n., scope and characters p. 554, DUPUIS Bull. Mus. Hist. nat., Paris (2) **21**.

Estheria, *Pseudodinera* B.B. a subgen. p. 108, MESNIL Bull. Ann. Soc. ent. Belg. **86**.

Euacemyia tibialis larva p. 100, SMITH & FINLAYSON Canad. J. Res. (D) **28**.

Euanisia gen. n. (Exoristinae) p. 12, *mesa-carrionii* sp. n. Uruguay p. 13 fig., BLANCHARD Comun. zool. Mus. Hist. nat. Montevideo **2** 1947 no. 42.

Eudoromyia vernalis R.-D. (= *magnicornis* Zett.) p. 153, MESNIL Bull. Soc. ent. Fr. **54**.

Euhapalivora indica sp. n. India p. 179 figs., GARDNER Indian J. Ent. **2** 1940.

Euomogenia see *Homogenia*.

Hemithrixion oestriforme larva p. 99, SMITH & FINLAYSON Canad. J. Res. (D) 28.

Homogenia V. de W. (= *Euomogenia* Twns.) p. 367, SABROSKY J. Wash. Acad. Sci. 40.

Larvaevora see *Tachina*.

Litophasia hyalipennis characters p. 202, COLLIN J. Soc. Brit. Ent. 3.

Masicerella indistincta sp.n. India p. 178 figs., GARDNER Indian J. Ent. 2 1940.

Microphtalma nigeriensis a valid sp.; *flavipes* sp. n. Belg. Congo p. 4, MESNIL Bull. Inst. Sci. nat. Belg. 26 no. 3.

Paradionaea atra larva p. 100, SMITH & FINLAYSON Canad. J. Res. (D) 28.

Peletieria rubescens R.-D. (= *prompta* Mg.) p. 154, MESNIL Bull. Soc. ent. Fr. 54.

Petia see *Procatharosia*.

Phasia sola see *Clytiophasia*.

Phoranthella morrisoni Tns. 1915 both nom. nud. and rejected, Bull. zool. Nomen. 4 p. 383.

Phorocera hamata early stages pp. 238-242 figs., BALDWIN & COPPEL Canad. Ent. 81.

Plagiotachina haywardi sp. n. Brazil, Argentina p. 16 fig., BLANCHARD Comun. zool. Mus. Hist. nat. Montevideo 2 1947 no. 42.

Procatharosia Vill. (= *Petia* Coq. preocc.) p. 190, ARNAUD Pan-Pacif. Ent. 26.

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Rhodogyne emdeni sp. n. Southern Rhodesia p. 114, MESNIL Bull. Ann. Soc. ent. Belg. 86.

Rhynchiodesia robusta status discussed, characters p. 111 figs., WEST Pap. Michigan Acad. Sci. Arts Lett. 34 pt. 2 Zool.

Rutilia albocincta see *Amphibolia*.

Tachina Mg. 1803 (*grossa* L. type) (= *Echinomyia* Dum. nom. nud.), valid to Latr. 1804, *Larvaevora* Mg.) pp. 30-31, MESNIL Bull. Soc. ent. Fr. 55.

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Thelymyiops subgen. n. (type *coniformis* Vill.) see *Carcelia*.

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Calliphora R.-D. (type *vomitoria* L.) placed on Official List of Specific Trivial Names, Bull. zool. Nomen. 4 p. 356.—*C. huttoni* n. n. for *eudypti* Hutt. (part.) p. 115, MILLER Bull. Dep. sci. industr. Res. N.Z. no. 100.—*C. vomitoria*, *grahami* genitalia p. 23 figs., HORI Misc. Rep. res. Inst. nat. Resources, Tokyo no. 16.

Lucilia characters of some spp. from Tokyo p. 23 figs., HORI t.c.—*L. cuprina*, *sericata*, distinct spp. characters pp. 311-323 figs., WATERHOUSE & PARAMONOV Aust. J. sci. Res. (B) Biol. Ser. 3.

Pavlovskomyia gen. n. p. 183, *inxpectata* sp. n. Sikhota-Alin, Russian Far East p. 185 figs., GRUNIN Parasit. Sborn. 9 1948.

Stomatorrhina lunata ♀ p. 155 etc. figs., JANNONE Boll. Lab. Ent. agr. Portici 9.

Triceratopyga calliphoroides genitalia p. 23, HORI Misc. Rep. res. Inst. nat. Resources, Tokyo no. 16.

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Key to first-stage Sarcophagid larvae, SMITH & FINLAYSON Canad. J. Res. (D) 28 p. 85.

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Boettcherimima gen. n., *hypopygialis* sp. n. Ecuador p. 706 figs., DE SOUZA LOPES t.c.

Dexosarcophaga excisa sp. n. Brazil p. 361 figs., DE SOUZA LOPES Rev. brasil. Biol. **10**.

Doringia acridiorum 1st larval instar pp. 291-297 figs., CROZEL Arthropoda, B. Aires **1**.

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Opsophyto opifera larva p. 96, SMITH & FINLAYSON Canad. J. Res. (D) **28**.

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Tephromyiella atlantis, *neuquenen-sis* larvae p. 95, SMITH & FINLAYSON t.c.

MUSCIDAE (s. l.).

Key to genn. and spp. of Ethiopian Stomoxydinae, with taxonomic and synonymous list (including N. Africa and Madagascar), ZUMPT An. Inst. Med. trop., Lisbon **7** pp. 397-426, 7 figs.

Acridomyia canadensis larva p. 102, SMITH & FINLAYSON Canad. J. Res. (D) **28**.

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Haematobia (H.) zuluensis sp. n. Zululand p. 423 figs., ZUMPT An. Inst. Med. trop., Lisbon **7**.

Helina olivacea Macq. p. 242, *subpubescens* Macq. (from *Mydaea*) p. 244, *rufipes* Macq. p. 245 characters figs., ALBUQUERQUE Rev. Ent., Rio de J. **21**.

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Melinia luteipennis sp. n. Sweden p. 189; key to Swedish spp. p. 190 figs., RINGDAHL Opusc. ent., Lund **15**.

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Mydaea fuscinervis (*limbatinervis*) see Steinella; *subpubescens* see *Helina*.

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Paraprosalpia subgen. n. of *Prosalpia* p. 511, VILLENEUVE Bull. Mus. Hist. nat. Paris **28** 1922.—P. Villen. (= *Prosalpia* Pokorny nec Koch (Arachn.)) raised to genus p. 426, KLOET & HINCKS List. Brit. Ins. 1945.—P. revision of N. American spp. pp. 121-132, 133-143, key to spp. p. 125; *genalis* p. 140, *gentilis* p. 142 spp. n. U.S.A.; *littoralis* Mall. from *Pegomyia* p. 134; *longipennis* Ringd. (= *Hylemyia bicruciatata* Mall.) p. 135 figs., HUCKETT Bull. Brooklyn ent. Soc. **45**.

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Cryptochaetum (*C.*) *vayssierei* sp. n.
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1949.

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Revision of Sphaeroeridae of Belg. Congo, VANSCHUYTBROECK Ann. Mus. Congo belge (Sér. 8°) Sci. zool. **5** 46 pp. 6 figs.

Sphaeroeridae of Africa, VANSCHUYTBROECK Bull. Inst. Sci. nat. Belg. **26** no. 25, 19 pp.

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List of Belgian Suctoria and hosts, COOREMAN Bull. Inst. Sci. nat. Belg. **26** no. 57, 12 pp.

Contribution to the knowledge of the Suctoria of Belg. Congo, COOREMAN Rev. Zool. Bot. afr. **43** pp. 329-335, 7 figs.

Siphonaptera of Madagascar, DE MEILLON Mém. Inst. sci. Madagascar (A) **4** pp. 67-73.

Check list of and systematic notes on the British Siphonaptera, FREEMAN Ent. mon. Mag. **86** pp. 14-22.

Notes on Br. Columbian fleas, HOLLAND Proc. ent. Soc. B.C. **46** pp. 5-13.

Fleas of Nevada, HUBBARD Bull. S. Calif. Acad. Sci. **48** pp. 115-128, 2 figs.

Some fleas from Peru, JORDAN Bull. World Hlth Org. **2** pp. 597-609, 5 figs.

Siphonaptera of Air, Fr. Sudan, JORDAN Mém. Inst. franç. Afr. noire no. 10 pp. 282-283.

Characteristics common to all known species of Suctoria, JORDAN Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 87-95, 25 figs.

Fleas collected in Kazakhstan, 1930-32, TIFLOV Trav. Sect. Kasakhsitan Acad. Sci. URSS **2** 1937 pp. 189-219, 18 figs.

Siphonaptera from Centr. America and Mexico, TRAUB Fieldiana, Zool. Mem. **1** pp. 11-88, figs.

Acropsylla girshami sp. n. N. Burma p. 137 figs., TRAUB Proc. ent. Soc. Wash. **52**.

Actenophthalmus further description p. 122 fig., HUBBARD Bull. S. Calif. Acad. Sci. **48**.

Catallagia mathesonii sp. n. California p. 94 figs., JAMESON J. Kans. ent. Soc. **23**.

Ceratophyllus caspius sp. n. Kazakhstan p. 194 figs., TIFLOV Trav. Sect. Kasakhsitan Acad. Sci. URSS **2** 1937.—*C. apollinaris* see *Pleochaetus graphis*, *campaniger* see *Kohlsia*; *calceatus* see *Syngenopsyllus*.

Chiropteropsylla brockmani ♀ p. 330 figs., COOREMAN Rev. Zool. Bot. afr. **43**.

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Doratopsylla ochotonae sp. n. Japan p. 6 fig., KISHIDA Iconogr. insect. japon. 1932.

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Foxella hoogstraali sp. n. Mexico p. 57 figs., TRAUB Fieldiana, Zool. Mem. 1.

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Hectopsylla knighti sp. n. Mexico p. 270 figs., TRAUB & GAMMONS J. Parasit. 36.

Hoplopsyllus manconis sp. n. Peru p. 600 figs., JORDAN Bull. World Hlth Org. 2.

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Nearctopsylla hamata p. 250, *princei* p. 251 spp. n. California; key to Nearctic spp. p. 253 figs., HOLLAND & JAMESON Canad. Ent. 81.

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Paraneopsylla gen. n., *ioffi* sp. n. Kazakhstan p. 201 figs., TIFLOV Trav. Sect. Kazakhstan Acad. Sci. URSS 2 1937.

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Pulex sinoculus sp. n. Guatemala p. 85 figs., TRAUB t.c.

Pygiopsylla momonga sp. n. Japan p. 6 fig., KISHIDA Iconogr. insect. japon. 1932.

Rectofrontia isacanthus head figured p. 63, SMIT Ent. Ber., Amst. 13.

Rhadinopsylla (Ralipsylla) li transbaikalica Ioff & Tifl., (*Rectofrontia acuminata* I. & T. discussed p. 201, HOPKINS Entomologist 83.—*R. dictinica, angusta* spp. n. Kazakhstan p. 204 figs., TIFLOV Trav. Sect. Kasakhstan Acad. Sci. URSS 2 1937.

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Syngenopsyllus gen. n. for *Ceratophyllus calceatus* Roths. p. 123 figs., TRAUB Proc. ent. Soc. Wash. 52.

Synosternus pallidus Tasch. (= *p. infestus* Wagn.) p. 283, JORDAN Mém. Inst. franç. Afr. noire no. 10.

Tarsopsylla coloradensis characters p. 305 figs., PRATT & LANE Proc. ent. Soc. Wash. 52.—*T. octodecimdentata* morphology p. 138 figs., SMIT Ent. Ber., Amst. 13.

Thrassis augustsoni allotype ♀ p. 10 fig., AUGUSTSON Bull. S. Calif. Acad. Sci. 49.

Trichopsylla discussed & proposed application to Int. Comm. for suppression pp. 31–33, HOPKINS Entomologist 83.

HEMIPTERA.

Hemiptera collected on the Cocos-Keeling Is., 1941, GIBSON-HILL Bull. Raffles Mus. no. 23 pp. 205–211.

Hemiptera of cruise of "Bougainville" to French Antarctic Is., JEANNEL Mém. Mus. Hist. nat., Paris (N.S.) 20 1947 pp. 1–24, 70 figs.

Additions to the Hemiptera of Süd-Häme Province, Finland, LINNA-VUORI Ann. ent. fenn. 16 pp. 121–125.

Catalogue of Hemiptera of Quebec, MOORE Nat. canad. 77 pp. 233–271.

List of some Hemiptera from Liberia, VILLIERS Bull. Inst. franç. Afr. noire 12 pp. 930–939.

Heteroptera.

Some Heteroptera from Albi, France, CARAYON Feuille Nat. (N.S.) 5 pp. 63–65.

Semiaquatic Heteroptera of Lunda, N.E. Angola, HOBERLANDT Publ. Serv. Cult. Mus. Dundo 1950 49 pp. 164 figs.

Heteroptera of E. Saxony, JORDAN Isis Budissina 14 1940 pp. 96–156.

Additions to Heteroptera of E. Saxony, JORDAN Mitt. naturw. Ges. "Isis" Bautzen Heft 28 1941 pp. 9–10.

Some Heteroptera from Majorca, PALAU Graellsia 7 1949 pp. 71–75.

Aquatic Hemiptera of Air, Fr. Sudan, POISSON Mém. Inst. franç. Afr. noire no. 10 pp. 316–317.

List of Heteroptera of Fontainebleau and Loing valley, ROYER Trav. Ass. Nat. Loing fasc. 11 pp. 136–155.

List of Heteroptera of Amrum, North Sea I., WEBER Kiefer Meeresforsch. 4 1942 pp. 133–147.

PLATASPIDAE (COPTOSOMATIDAE).

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PENTATOMIDAE, UROSTYLIDAE.

Second supplement to catalogue of Scutelleroidea, HOFFMANN Lingnan Sci. J. 23 pp. 21–42.

Pentatomoidae of National Park of Białowieża, STRAWIŃSKI Ann. Univ. Mariae Curie-Skłodowska (C) 4 pp. 277–296.

Pentatomidae of Air, Fr. Sudan, VILLIERS Mém. Inst. franç. Afr. noire no. 10 pp. 326–328, 1 fig.

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Adoxoplatys redescription p. 315, key to spp. p. 323; *bridarollii* p. 316, *willineri* p. 320 spp. n. Bolivia figs., KORMILEV Notas Mus. La Plata 14 (Zool.) 1949.—*A. giae* sp. n. Argentina p. 343 fig., KORMILEV Rev. brasil. Biol. 10.

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Antestia lineaticollis, *faceta* eggs p. 476, FIEDLER Z. angew. Ent. 31.

Arma custos egg, key to instars p. 41 figs., MIYATAKE & YANO Trans. Shikoku ent. Soc. 1.

Bagrada cruciferarum early stages pp. 12–14, RAKSHPAL Indian J. Ent. 11.

Bellocoris Hahn 1834, *austriacus* Schrank designated type, placed on Official List, Bull. zool. Nomen. 4 p. 473.

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Ectenus revision pp. 285–289, key p. 286; *spinosus* sp. n. Negros I. p. 288, UICHANCO Philipp. J. Sci. 78.

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Nezara antennalis egg p. 18, instars p. 20, ISHIHARA Trans. Shikoku ent. Soc. 1.

Phricodus brouini sp. n. Fr. Sudan p. 327 fig., VILLIERS Mém. Inst. franç. Afr. noire no. 10.

Piezodorus rubrofasciata egg, larva p. 23 figs., ISHIHARA Trans. Shikoku ent. Soc. 1.

Ramosiana gen. n., *militaris* sp. n. Bolivia p. 340 figs., KORMILEV Rev. brasili. Biol. 10.

Sastragala nipponica sp. n. Japan p. 57 fig., ESAKI & ISHIHARA Trans. Shikoku ent. Soc. 1.

Stollia fabricii late nymphal stages p. 302 figs., MACGILL Ent. mon. Mag. 86.

Tetra F. 1803, *antillarum* Kirby. designated type, placed on Official List, Bull. zool. Nomen. 4 p. 474.

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Coreidae of Air, Fr. Sudan, VILLIERS Mém. Inst. franç. Afr. noire no. 10 pp. 323–326, 3 figs.

Acanthomia lamottei sp. n. Fr. Guinea p. 654 fig., VILLIERS Bull. Inst. franç. Afr. noire 12.

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ARADIDAE.

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Congr. Ent. Stockholm 1948, 1950
pp. 174-179.

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VILLIERS Mém. Inst. franç. Afr. noire
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Reduviidae of Air, Fr. Sudan, VILLIERS Mém. Inst. franç. Afr. noire no. 10 pp. 317–321, 1 fig.

Revision of African Emesinae, VILLIERS Mém. Mus. Hist. nat., Paris (N.S.) 23 1949 pp. 257–392, 337 figs.

Reduviidae of Angola, VILLIERS Publ. cult. Mus. Dundo no. 7 pp. 71–108, 13 figs.

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Eurymetra angolensis sp. n. Angola p. 11 figs., HOBERLANDT Publ. Serv. Cult. Mus. Dundo 1950.

Eurymetropiella gen. n. p. 73, *schoutedeni* sp. n. Belg. Congo p. 74 figs., POISSON Rev. Zool. Bot. afr. 43.

Gerris canaliculatus instars p. 77, PENN & GOLDSMITH J. Tenn. Acad. Sci. 25.

Limnogonus nigrescens ♂ p. 11 figs., HOBERLANDT Publ. Serv. Cult. Mus. Dundo 1950.

Metrocoris omanensis sp. n. Arabia p. 477 fig., BROWN Ann. Mag. nat. Hist. (12) 3.

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Gelastocoris major sp. n. Brazil, Bolivia etc. p. 2, MONTANDON Annu. Mus. zool. Univ. Napoli (N.S.) 3 1910.

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Revision of Ambrysinae, DE CARLO An. Soc. cient. Argent. 150 pp. 3-27, 7 figs.

Ambrysus gemignanii sp. n. Argentina p. 25 fig., DE CARLO An. Soc. cient. Argent. 150.

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Corrections and additions to list of Iowa Corixidae, MILLSPAUGH Proc. Iowa Acad. Sci. 56 1949 pp. 371-375, 1 fig.

Corixa Geoffr. 1762 validated; *geoffroyi* Leach designated type, Bull. zool. Nomen. 4 p. 369.—*C. sexcincta* Champ. (= *sexlineata* Champ. (preocc.), *naia* Kirby, *championi* Jacz.) p. 13, HUSSEY Ent. News 61.—*C. pseudaffinis* sp. n. Belg. Congo p. 88 fig., POISSON Rev. Zool. Bot. Afr. 43.

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Some Homoptera from Shansi, China, ESAKI & ISHIHARA Mushi 21 pp. 39-48, 3 pls. 1 fig.

Fulgoroidea of Air, Fr. Sudan, LALLEMAND Mém. Inst. fran^c. Afr. noire no. 10 pp. 314-315, 1 fig.

Cicadoidea of Fennoscandinavia, LINDBERG Fauna fenn. 1 1947 pp. 1-81.

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Belbina recurva, foliacea spp. n. Madagascar p. 84 figs., LALLEMAND Mém. Inst. sci. Madagascar 4A.

Druentia maculata sp. n. Senegal p. 265 figs., RISBEC Agron. trop. 5.

Episcius guianensis sp. n. Br. Guiana p. 174 figs., NAST Ann. Mus. zool. polon. 14.

Flatolystra gen. n. p. 167, *unicolor* (type) Peru, *ypsilone* p. 168, *bisiniuata* Brazil, Br. Guiana, *basalis* Fr. Guiana, *distincta* Br. Guiana p. 170 spp. n. figs., NAST t.c.

Kutariana gen. n. p. 171, *jassooides* sp. n. Br. Guiana p. 172 figs., NAST t.c.

Neocynthus gen. n. p. 172, *crassus* sp. n. Brazil, Colombia p. 173 figs., NAST t.c.

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DERBIDAE.

Lamenia onoensis sp. n. Caroline Is. p. 63 figs., METCALF Occ. Pap. Bishop Mus. 20.

ACHILIDAE.

Generic revision of Achilidae of World, with morphological characters, FENNAH Bull. Brit. Mus. (Nat. Hist.) Ent. 1 pp. 1-170, 119 figs.

Abas gen. n., *unipunctatus* sp. n. Guatemala p. 61 figs., FENNAH Bull. Brit. Mus. (Nat. Hist.) Ent. 1.

Achilus collaris see *Breddiniola*.

Ateson reduced to subgen. of *Sevia* q.v.

Ballomarius bilobatus p. 129, *kawandanus* Uganda, *inermis* Sierra Leone p. 131 spp. n. figs., FENNAH Bull. Brit. Mus. (Nat. Hist.) Ent. 1.

Bathycephala gen. n., *guianesa* sp. n. Br. Guiana p. 113 figs., FENNAH t.c.

Booneta ferrugineus Wlk. (= *Cixius caliginosus* Wlk.); *luridus* Wlk. from *Gixius* p. 40 figs., FENNAH t.c.

Breddiniola collaris Hagl. from *Achilus* p. 37 figs., FENNAH t.c.

Breddiniola gen. n., *leveri* sp. n. Fiji p. 37 figs., FENNAH t.c.

Caffropyrrhyllis gen. n. p. 67, *bicuspidata* sp. n. Cape Province p. 68 figs., FENNAH t.c.

Catonia (*Pyren* subgen. n. p. 147); (*C.*) *sancti-vincenti* St. Vincent p. 148, (*C.*) *mitrata* p. 151, (*C.*) *digitalis* p. 155, (*C.*) *dominicana* p. 156, (*P.*) *saltator* p. 166 Dominica, (*C.*) *antiguana* p. 152, (*C.*) *majore* p. 153 Antigua, (*C.*) *montserratensis* Montserrat p. 157, (*C.*) *sancti-geronimi* p. 161, (*C.*) *zunilana* p. 163, (*C.*) *championi* (also Panama) p. 164 Guatemala, (*C.*) *bugabae* p. 162, (*C.*) *muscosa* p. 165, (*C.*) *moraballi* p. 166 Br. Guiana spp. n. figs., FENNAH t.c.

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Cionoderella gen. n. p. 107, *rubromarginata* sp. n. Ecuador p. 108 figs., FENNAH t.c.

Cixius caliginosus, *luridus* see *Booneta*; *difflinis*, *guttifer* see *Faventilla*; *laevifrons* see *Pyrrhyllis*.

Elidiptera globulifera Wlk. from *Euria* p. 24 figs., FENNAH t.c.—*E. advena* see *Neomenocria*.

Epiptera revision of Canadian spp. pp. 186–190, key p. 186; *manitobiana* p. 187, *confusa* p. 189 Canada spp. n. figs., BEIRNE Canad. Ent. 82.—*E. fusca* Wlk. (= *Monopsis floridæ* Wlk.) from *M.* p. 20 figs., FENNAH Bull. Brit. Mus. (Nat. Hist.) Ent. 1.

Epiusana gen. n. p. 137, *rugiceps* sp. n. Nyasaland p. 138 figs., FENNAH t.c.

Errada see *Rhotala*.

Euria globulifera see *Elidiptera*.

Faventilla diffinis Wlk., *guttifer* Wlk. from *Cixius* p. 39 figs., FENNAH t.c.

Flatachilus gen. n. for *Poeciloptera diffinis* Wlk. p. 41 figs., FENNAH t.c.

Helicoptera longiceps see *Koloptera*.

Hemiplectoderes gen. n., *trabeculatus* sp. n. Trinidad p. 62 figs., FENNAH t.c.

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Kurandella gen. n., *nigromaculata* sp. n. Queensland p. 106 figs., FENNAH t.c.

Lanuvia luteovittata Cameroons p. 75, *octoguttata* Uganda p. 76 spp. n. figs., FENNAH t.c.

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Monopsis fusca, *floridæ* see *Epiptera*.

Moraballia gen. n. p. 111, *fuginosa* sp. n. Br. Guiana p. 112 figs., FENNAH t.c.

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Ouwea see *Catoniida*.

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Parelidiptera gen. n. p. 34, *teres* sp. n. Brazil p. 35 figs., FENNAH t.c.

Plectoderella subgen. n. (type *scapularis* Met.) see *Plectoderes*.

Plectoderes (*Plectoderella* subgen. n.) p. 56 figs., FENNAH t.c.—*P. excelsus* see *Plectoringa*; *championi* see *Rhinocolura*; *notatus* see *Spino*; *lineatocollis* see *Momar*; *asper* see *Rupex*.

Plectoringa gen. n. for *Plectoderes excelsus* Fowl. p. 65 figs., FENNAH t.c.

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Prinoessa gen. n. p. 28, *livida* sp. n. Br. Guiana p. 29 figs., FENNAH t.c.

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Pyren subgen. n. (type *saltator* sp. n.) see *Catonia*.

Pyrrhyllis laevifrons Wlk. from *Cixius* p. 55 figs., FENNAH t.c.

Remosachilus gen. n. p. 122, *macrocephalus* sp. n. New Guinea p. 123 figs., FENNAH t.c.

Rhinocolura gen. n. for *Plectoderes*

championi Fowl. p. 67 figs., FENNAH t.c.

Rhotala Wlk. (= *Errada* Wlk.) p. 15, FENNAH t.c.

Rupex gen. n. for *Plectoderes asper* Fowl. p. 57 figs., FENNAH t.c.

Sevia (*Ateson* Met. reduced to subgen.) ; *bicarinata* F. (= *marmoratum* Met.) p. 45 figs., FENNAH t.c.

Spendon see *Catonidia*.

Spino gen. n. for *Plectoderes notatus* Fowl. p. 58 figs., FENNAH t.c.

Symplegadella gen. n. p. 63, *irrorata* sp. n. Guatemala p. 64 figs., FENNAH t.c.

DELPHACIDAE (ARAEOPIDAE).

Revision of the Araeopidae of Japan, Ryukyu Is. and Formosa, ISHIHARA Sci. Rep. Matsuyama agric. Coll. no. 2, 102 pp. 17 pls.

Bakerella key to N. American spp. p. 102; *bullata* p. 103, *spinifera*, *pediforma* p. 104, *minuta* p. 105, *angulata* p. 107, *cornigera* p. 108, *penefusca* p. 109 spp. n. U.S.A. figs., BEAMER J. Kans. ent. Soc. 23.

Calligypona see *Delphacodes*.

Chloriona shikokuana Mats. (= *sukumonis* Mats.) p. 33 figs., ISHIHARA Sci. Rep. Matsuyama agric. Coll. no. 2 1949.

Coronacella gen. n. p. 59, *bella* sp. n. Caroline Is. p. 60 figs., METCALF Occ. Pap. Bishop Mus. 20.

Delphacodes Fieb. (= *Calligypona* Sahlb.) p. 43; *panicola* p. 51, *shirozui* p. 53, *agropyri* p. 55, *fukuokae* p. 57, *kuwaharai* p. 58, *nigerrima* p. 59 spp. n. Japan; *sameshima* Mats. & Ishi. from *Kakuna* p. 54; *sapporona* Mats. from *Unkanna* p. 57; *albicollis* Mots. from *Liburnia*; *sahlbergiana* n. n. for *albicollis* Sahlb. nec Mots. p. 66 figs., ISHIHARA Sci. Rep. Matsuyama agric. Coll. no. 2 1949.—*D. detecta* characters p. 68; *penedecta* sp. n. Florida, Louisiana p. 70 figs., BEAMER J. Kans. ent. Soc. 23.—*D. sapporona* see *Kakuna*.

Dicranotropis nagaragawana Mats. (= *cervina* Muir); *esakii* sp. n. Japan p. 71 figs., ISHIHARA Sci. Rep. Matsuyama agric. Coll. no. 2 1949.—*D. nigropunctatus* see *Phyllodinus*.

Epunka see *Euidella*.

Euidella Put. (= *Epunka* Mats., *Toyoides* Mats.) p. 33, ISHIHARA Sci. Rep. Matsuyama agric. Coll. no. 2 1949.

Euidellana gen. n., *carolinensis* sp. n. Caroline Is. p. 61 figs., METCALF Occ. Pap. Bishop Mus. 20.

Himeunka tateyamaella Mats. (= *Unkana kushiana* Mats.) p. 42 figs., ISHIHARA Sci. Rep. Matsuyama agric. Coll. no. 2 1949.

Hosunka Mats. (= *Unkanella* Esaki & Ishi.) p. 38, ISHIHARA t.c.

Jamiphax see *Phyllodinus*.

Jugodina see *Ugyops*.

Kakuna sapporoni Mats. from *Delphacodes* p. 37, ISHIHARA Sci. Rep. Matsuyama agric. Coll. no. 2 1949.—*K. sameshima* see *Delphacodes*.

Kelisoidea gen. n., *versa* sp. n. Florida p. 132 fig., BEAMER J. Kans. ent. Soc. 23.

Keyflana gen. n., *hasta* sp. n. Florida p. 131 fig., BEAMER t.c.

Laccocera canadensis sp. n. Saskatchewan p. 173 figs., BEIRNE Canad. Ent. 82.

Liburnia sancti-pauli sp. n. St. Paul I. p. 3; early stages p. 7; abdomen p. 9 figs., JEANNELL Mém. Mus. Hist. nat., Paris (N.S.) 20 1947.—*L. albicollis* see *Delphacodes*; *colocasiae* see *Megamelus proserpina*.

Megamelus proserpina Kirk. (= *Liburnia colocasiae* Mats.) p. 78 figs., ISHIHARA Sci. Rep. Matsuyama agric. Coll. no. 2 1949.

Parkana gen. n., *alata* sp. n. U.S.A. p. 128 fig., BEAMER J. Kans. ent. Soc. 23.

Penepissonotus gen. n., *bicolor* sp. n. U.S.A. p. 129 fig., BEAMER t.c.

Phyllodinus Van Duzee (= *Jamiphax* Mats.) p. 73; *nigropunctatus* Mots. (= *J. nigropunctatus* Mats.) from *Dicranotropis* p. 75; *aritainoides* Schum. p. 76, *affinis* Schum. p. 77 from *Pundaluoya* figs., ISHIHARA Sci. Rep. Matsuyama agric. Coll. no. 2 1949.

Pundaluoya aritainoides, *affinis* see *Phyllodinus*.

Rontundifronta gen. n., *lutea* sp. n.
Florida p. 133 fig., BEAMER J. Kans.
ent. Soc. 23.

Stenocranus minutus F. (= *sapporenensis* Mats., *vittatus* Mats.) p. 26 figs.,
ISHIHARA Sci. Rep. Matsuyama agric.
Coll. no. 2 1949.

Terauchiana yasumatsui sp. n.
Shansi p. 47 figs., ESAKI & ISHIHARA
Mushi 21.

Toyoides see *Euidella*.

Ugyops Guér. (= *Jugodina* Schum.)
p. 9; *vittatus* Mats. (= *dictyophoroides* Schum.) p. 10 figs., ISHIHARA
Sci. Rep. Matsuyama agric. Coll. no. 2 1949.

Unkana kushiana see *Himeunka tateyamae*.

Unkanella see *Hosunka*; *sapporona*
see *Delphacodes*.

DICTYOPHARIDAE.

Dictyophora montana p. 632, *turbata* p. 633 spp. n. Senegal, LALLEMAND Bull. Inst. franç. Afr. noire 12.—*D. unicolor* var. n. *ochracea* Madagascar p. 86 figs., LALLEMAND Mém. Inst. sci. Madagascar 4A.

CIXIIDAE.

Revision of Canadian Cixiidae,
BEIRNE Canad. Ent. 82 pp. 93-101,
22 figs.

Benna guttata, *praestans* see
Bennaria.

Bennaria formosana Formosa,
cyclopina Dutch New Guinea p. 179,
chinai Borneo p. 180, *marmorata*
Sarawak p. 181, *ditiisa* Sula, Amboina p. 183, *fennahi* Solomon Is. 184 spp. n.; *guttata* Wlk. p. 180, *praestans* Wlk. p. 182 from *Benna*; *buruana* Schm. from *Brixia* key to E. Asiatic spp. p. 184 figs., NAST Ann. Mus. zool. polon. 14.

Bothriocera hispaniolae sp. n. Dominican Republic p. 1, CALDWELL Amer. Mus. Novit. no. 1460.—*B. nigra*, *albidipennis* see *Bothrioceretta*.

Bothrioceretta gen. n. for *Bothriocera nigra* Fowl. (type), *albidipennis* Fowl. p. 289 figs., CALDWELL Proc. ent. Soc. Wash. 52.

Brixia buruana see *Bennaria*.

Cixius key to Canadian spp. p. 96; *meridionalis* p. 98, *fulvus* p. 100 spp. n. Canada figs., BEIRNE Canad. Ent. 82.—*C. cultus*, *praecox*, *stigmatus* see *Pseudocixius*; *caliginosus*, *luridus*, *diffinis*, *guttifer*, *laevifrons* see under *ACHILIDAE*.

Cubanella haitiensis Haiti, *jamicensis* Jamaica spp. n. p. 2 figs., CALDWELL Amer. Mus. Novit. no. 1460.

Oliarus key to Canadian spp. p. 93; *artemisiae* sp. n. Br. Columbia p. 94 figs., BEIRNE Canad. Ent. 82.

Pseudocixius gen. n. p. 289, *bandarus* sp. n. (type) Mexico; *cultus* Ball, *praecox* Van Duz., *stigmatus* Say from *Cixius*; *s. subsp. n. mexicanus* Mexico p. 290 figs., CALDWELL Proc. ent. Soc. Wash. 52.

FLATIDAE.

Chaetormenis impunctata see
Panormenis.

Panormenis impunctata Schm. from *Chaetormenis* p. 94 figs., LALLEMAND Mém. Inst. sci. Madagascar 4A.

Pauliana gen. n., *insignis* sp. n. Madagascar p. 93 figs., LALLEMAND t.c.

ISSIDAE.

Issarius gen. n. p. 67, *carolinensis* sp. n. Caroline Is. p. 68 figs., METCALF Occ. Pap. Bishop Mus. 20.

Triaenopa janssensi sp. n. Madagascar p. 86 figs., LALLEMAND Mém. Inst. sci. Madagascar 4A.

RICANIIDAE.

Armacia clara var. n. *pallescens* Caroline Is. p. 66 figs., METCALF Occ. Pap. Bishop Mus. 20.

Exphora longipennata p. 91, *succiniae* p. 92 spp. n. Madagascar figs., LALLEMAND Mém. Inst. sci. Madagascar 4A.

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Privesa formosa sp. n. Madagascar p. 89 figs., LALLEMAND t.c.

Ricania insularis sp. n. p. 631 (with var. n. *fusca* p. 632) San Thomé, LALLEMAND Bull. Inst. franç. Afr. noire 12.

LOPHOPIDAE.

Pyrrilla perpusilla nymphal stages p. 8 figs., QADRI & AZIZ Aligarh Muslim Univ. Publ. (Zool. Ser.) no. 2.

EURYBRACHIDAE.

Amychodes exsecatus see *Aspidioxys incertus*.

Aspidioxys gen. n., *incertus* (type) n. n. for *Amychodes exsecatus* Lall. nec Karsch; *punctata* sp. n. Cameroons p. 152, LALLEMAND Rev. franç. Ent. 17.

Macrobrachys gen. n., *tonkinensis* sp. n. Tonkin p. 150, LALLEMAND t.c.

Mesonitys taeniata var. n. *katangana* Belg. Congo p. 150, LALLEMAND t.c.

Neoplatybrachys gen. n., *orientalis* sp. n. Aden p. 149, LALLEMAND t.c.

Paropioxys chopardi sp. n. Fr. Sudan p. 314 fig., LALLEMAND Mém. Inst. franç. Afr. noire no. 10.

Thessitus tibetanus (with var. n. *tsekouana*) sp. n. Tibet p. 151, LALLEMAND Rev. franç. Ent. 17.

CERCOPIDAE.

Aphrophora alni f. n. *umbrina* Finland p. 182, LINNAUORI Ann. ent. fenn. 16.

Cephisus siccifolius larval instars p. 10 figs., TORRES Notas Mus. La Plata 15 (Zool.) no. 151.

Clovia altipeta sp. n. Madagascar p. 95 figs., LALLEMAND Mém. Inst. sci. Madagascar 4A.

Eulepyroniella gen. n. for *Lepyronia aethiops* Dist. (type); *lineata* sp. n. Cameroons p. 630, LALLEMAND Bull. Inst. franç. Afr. noire 12.

Lallemandana carolinensis p. 70, zimmermani p. 72 spp. n. Caroline Is. figs., METCALF Occ. Pap. Bishop Mus. 20.—*L. fenestrata* subsp. n. *raroonganae* Cook Is. p. 59 figs., DUMBLETON Proc. Hawaii. ent. Soc. 14.

Lepyronia aethiops see *Eulepyroniella*.

Locris bipunctata var. n. *atra* Madagascar p. 94 figs., LALLEMAND Mém. Inst. sci. Madagascar 4A.

Philaenus spumarius L. identity discussed pp. 145–152 figs., OSSIAN-NILSSON Opusc. ent., Lund 15.

Sphenorhina revision pp. 114–148; *bivitta* Wlk. (= *Tomaspis vitattipennis* Stål) p. 122; *punctum* p. 123, *femorata* p. 124, *inflexa* p. 128, *confusa* p. 142 Mexico, *quezaltana* Guatemala p. 125, *nicaraguana* Nicaragua p. 130, *secundaria* p. 131, *distans* p. 141 Colombia, *digitata* p. 138, *relata* p. 139, *cygnus* p. 141 Ecuador, *panamensis* Panama p. 144 spp. n.; *fowleri* Lall. a sp. not var. of *assimilis* Fowl. p. 134; male genitalia p. 145 figs., NAST Polsk. Pismo ent. 19.

Tomaspis vitattipennis see *Sphenorhina bivitta*.

MEMBRACIDAE.

Catalogue of Membracidae (with some new tribes & subfamn.), FUNKHOUSER Wytsm. Gen. Ins. 208 383 pp. 14 pls. 9 figs.

Old World Membracidae (concl.), GODING J.N.Y. ent. Soc. 58 pp. 117–129, 251–268.

Centrotus distantii n. n. for *cornuta* Dist. nec L. p. 197, FUNKHOUSER Gen. Ins. 208.

Eteoneus see *Postanomus*.

Eufrenchia bucktoni n. n. for *falcatus* Buckt. nec Wlk. p. 241, FUNKHOUSER Gen. Ins. 208.

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JASSIDAE (CICADELLIDAE).

Revision of Canadian Balcluthini, BEIRNE Canad. Ent. 82 pp. 123-126, 8 figs.

Revision of Cicadellinae in Melichar's collection, DLABOLA Acta Mus. morav. 35 pp. 167-182, 1 pl.

Balclutha key to Canadian spp. p. 123; *arctica* sp. n. Yukon p. 124 figs., BEIRNE Canad. Ent. 82.—*B. boica* sp. n. Bavaria p. 97; key to Centr. European spp. p. 99 figs., WAGNER Ber. naturf. Ges. Augsburg 3.

Baldulus key to spp. p. 106; *bilineatus* (also U.S.A.) p. 108, *tropicus* p. 109 spp. n. Mexico figs., DeLONG Bull. Brooklyn ent. Soc. 45.—*B. elimatus*, *maidis* see *Dalbulus*.

Dalbulus gen. n. for *Baldulus* *elimatus* Ball (type), *B. maidis* DeL. p. 105; *guevarai* p. 110, *longulus* p. 111, *acus* p. 112, *gelbus* no locality p. 114 spp. n. Mexico figs., DeLONG Bull. Brooklyn ent. Soc. 45.

Deltanus bicolor sp. n. Louisiana p. 63, BEAMER J. Kans. ent. Soc. 23.

Dikranearva hamar sp. n. Tennessee p. 87 figs., DeLONG & ROSS Ohio J. Sci. 50.

Diplocolenus melichari sp. n. Tiflis pp. 178, 182, DLABOLA Acta Mus. morav. 35.

Ebarrius interstinctus, *cognatus* characters p. 146 figs., LINNAUORI Ann. ent. fenn. 15.

Empoasca abstrusa sp. n. Finland p. 148 figs., LINNAUORI t.c.—*E. fabalis* DeL. (= *babatae* Poos) p. 226, CALDWELL J. Agric. Univ. P.R. 31.

Erythroneura characters of *maculata* group; *millsi* p. 291, *rangifer*

p. 292, *querocalbae*, *spala*, *tenilla* p. 294, *arenosa*, *coxi*, *igella* p. 295, *stoveri*, *acantha* p. 296 spp. n. U.S.A. figs., ROSS & DELONG Ohio J. Sci. 50.—*E. tamaricis* Put. (= *Zygina bipunctata* Mel.) pp. 174, 181, DLABOLA Acta Mus. morav. 35.

Eupterella gen. n., *mexicana* (type) p. 239, *frigida*, *acuminata*, *gladia* p. 240 (with *varr. n. limba*, *bifasciata*), *bicolorata* p. 242 spp. n. Mexico; *huachucae* Laws. from *Eupteryx* p. 239 figs., DELONG & RUPPEL Ohio J. Sci. 50.

Eupteryx huachucae see *Eupterella*.

Macropsis revision of Centr. European spp. feeding on *Salix* pp. 81-114, key to larvae p. 89; *sulphurella* Zett. status discussed p. 85; *graminea* F. (= *populi* Edw.); *fuscula* Zett. (= *nassata* Ger.) p. 86; *prasina* Boh. (= *flavus* Sahlb.) p. 87; *marginata* subsp. n. *ossianilssonii* Germany, *injucunda* Carinthia p. 94; *viridinervis* p. 98, *albae* (with subsp. n. *lanzkei*) p. 99 Germany, Czechoslovakia spp. n.; *cerea* subsp. n. *harrisoni* England p. 109 figs., WAGNER Notul. ent., Helsinki 30.

Mocuellus stehlikii sp. n. Russia pp. 175, 181, DLABOLA Acta Mus. morav. 35.

Nephrotettix apicalis characters p. 75 figs., PAULIAN Mém. Inst. sci. Madagascar 4A.

Texananus incurvatus characters p. 541 fig., DELONG & SEVERIN Hilgardia 19.

Tharra flavomaculata p. 73, *rubrovittata* p. 75 spp. n. Caroline Is. figs., METCALF Occ. Pap. Bishop Mus. 20.

Typhlocyba 10-punctata subsp. n. *intercedens* Finland p. 152 fig., LINNAUORI Ann. ent. fenn. 15.—*T. soror* sp. n. Finland p. 185 figs., LINNAUORI op. cit. 16.

Ulopa hovana sp. n. Madagascar p. 95 figs., LALLEMAND Mém. Inst. sci. Madagascar 4A.

Zygina bipunctata see *Erythroneura tamaricis*.

PELORIDIIDAE.

New Zealand Peloridiidae, CARTER Trans. Proc. roy. Soc. N.Z. 78 pp. 167-170, 3 figs.

Oiophysa gen. n. p. 3, *ablusa* (type) p. 4, *fuscula* p. 6 spp. n. New Zealand figs., DRAKE & SALMON Zool. Publ. Vict. Univ. Coll. no. 6.

Xenophyes cascus ♀ p. 168, genitalia p. 169 figured, CARTER Trans. Proc. roy. Soc. N.Z. **78**.

PSYLLIDAE (CHERMIDAE).

Contribution to the knowledge of Psyllids of Mexico, pt. 2, TUTHILL J. Kans. ent. Soc. **23** pp. 52–63, 1 pl.

Coelocara schwarzi Tut. (= *coahuayanae* Ferr. pro parte) p. 56; *ernstii* Schwarz (= *coahuayanae* Ferr. pro parte) p. 57, TUTHILL J. Kans. ent. Soc. **23**.

Gyropsylla Brèth. (= *Metaphalara* Crwf.); *spegazziniana* Lizer (= *G. ilicicola*) p. 178, TUTHILL Ent. News **61**.

Holotrioza Brèth. in Pauropsylinae p. 178, TUTHILL t.c.

Kuwayama elongagena Cald. (= *sincera* Tut.) from *Rhinopsylla* p. 60, TUTHILL J. Kans. ent. Soc. **23**.

Metaphalara see *Gyropsylla*.

Powellia vitreoradiata early stages p. 32 figs., CARTER N.Z.J. Sci. (B) **31** no. 2.

Psylla cedrelae immature stages pp. 226–227 figs., MATHUR Ent. mon. Mag. **86**.—*P. piri* early stages pp. 10–14 figs., WILLE Promotionsarbeit Eidg. tech. Hochsch. Zürich.—*P. myrti* redescription p. 184 figs., VONDRÁČEK Acta Mus. morav. **35**.

Rhinopsylla elongagena see Kuwayama.

APHIDAE.

Aphids new to Switzerland, III, HILLE RIS LAMBERS Mitt. schweiz. ent. Ges. **23** pp. 37–46, 4 figs.

Host plants and Aphid classification, HILLE RIS LAMBERS Proc. 8th int. Congr. Ent. Stockholm 1948, 1950 pp. 141–144.

Further list of Aphids from Mysore, KRISHNAMURTI Indian J. Ent. **10** pp. 51–53.

Recent additions to British Aphid fauna, I, *Dactynotus*—*Rhopalosiphum*, with some descriptions, STROYAN Trans. R. ent. Soc. Lond. **101** pp. 89–124.

Acaudella rubida see *Pseudacaudella*.

Acyrthosiphon anthyllidis, *parvus* spp. n. Steiermark p. 13, BÖRNER N. eur. Blattl.

Allocotaphis gen. n. for *Neanaphis quaestionis* Börn. p. 4, BÖRNER t.c.

Aloephagus gen. n., *myersi* sp. n. California p. 22 figs., ESSIG Pan-Pacif. Ent. **26**.

Amphorophora wickstroemiae Mamet a sp. not var. of *phyllanthi* redescribed and spelling corrected p. 1 figs., MAMET Proc. R. ent. Soc. Lond. (B) **19**.

Anoecia major p. 16, *haupti*, *agrostidis*, *nemoralis* Germany, *disculigera* Burgenland, *mineuri* Spain p. 17 spp. n., BÖRNER N. eur. Blattl.

Aphis borealis Curt. 1828 discussed and description quoted pp. 93–94, HOTTES Pan-Pacif. Ent. **26**.—*A. hamamelidis* sp. n. Pennsylvania p. 14 figs., PEPPER Florida Ent. **33**.—*A. montanicola* sp. n. Switzerland p. 43 figs., HILLE RIS LAMBERS Mitt. schweiz. ent. Ges. **23**.

Arthromyzus subgen. n. see *Hyperomyzus*.

Aspidaphis porosiphon sp. n. Germany p. 9, BÖRNER N. eur. Blattl.

Atheroides stipae sp. n. Germany p. 3, BÖRNER t.c.

Aulacorthum doronici p. 13, *porrifolii* Steiermark, *prasinum* Germany p. 14 spp. n., BÖRNER t.c.

Brachycaudus linariae sp. n. England p. 60 figs., STROYAN Proc. R. ent. Soc. Lond. (B) **19**.

Brachycolus mühlei Germany, *singularis* E. Alps spp. n. p. 9, BÖRNER N. eur. Blattl.

Brachysiphon funictectus sp. n. Germany p. 9, BÖRNER t.c.

Byrsocrypta personata sp. n. Germany p. 17, BÖRNER t.c.

Calaphis alnosa sp. n. Pennsylvania p. 9 figs., PEPPER Florida Ent. **33**.

Cerosipa longirostris sp. n. Austria p. 8, BÖRNER N. eur. Blattl.

Chaetophoria uhlmanni sp. n. Germany p. 3, BÖRNER t.c.

Chromaphis cirsii, centaureae spp. n.
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BÖRNER t.c.—*D. (Uromelan) helenae*
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Mitt. schweiz. ent. Ges. 23.—*D.
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STROYAN Proc. 8th int. Congr. Ent.
Stockholm 1948, 1950.

Defractosiphon gen. n., *franzi* sp. n.
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Doralis xylostei, solidaginis spp. n.
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BÖRNER t.c.

Galiobium langei microscopic mor-
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ent. Soc. Lond. 101.

Glyphina schrankiana n. n. for
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Proc. R. ent. Soc. Lond. (B) 19.

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Lipaphis fritzmuelleri sp. n. Ger-
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Metopeurum fuscoviride sp. n.
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Metopolophium gracilipes Austria,
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Pflanzenschutz 1.

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- Neanoecia* gen. n., *krizusi* sp. n. Germany p. 16, BÖRNER N. eur. Blattl.
- Neanuraphis quaestionis* see *Allo-cotaphis*.
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- Pleotrichophorus persimilis* sp. n. Germany p. 12, BÖRNER t.c.
- Prociphilus bumeliae, nidificus* heads of alate ♀♀ p. 223 figs., LAING in D[AVIES] Quart. J. For. 44.
- Protrama ranunculi* characters p. 27, HEIKINHEIMO Ann. ent. fenn. 16.
- Pseudacaudella* nom. nud. p. 216, BÖRNER Fn. Dtschl. 1944; gen. n. for *Acaudella rubida* Börn. p. 9, BÖRNER N. eur. Blattl.
- Pseudomicrella jacobi* Germany, *reticulata* Austria spp. n. p. 3, BÖRNER t.c.
- Pterocomma dubium* sp. n. Germany p. 4, BÖRNER t.c.
- Pyrethromyzus* nom. nud. p. 217, BÖRNER Fn. Dtschl. 1944; gen. n. for *Macrosiphoniella sanborni* Gill. p. 15, BÖRNER t.c.
- Rhopalomyzus* subgen. n. see *Hyperomyzus*.
- Sappaphis bonomii* p. 105, *choero-phylli* p. 107, *hirsutissima* p. 109, *lauberti* p. 112 microscopical morphology, STROYAN Trans. R. ent. Soc. Lond. 101.—*S. ariae* sp. n.
- Steiermark p. 6, BÖRNER N. eur. Blattl.
- Schizaphis hirticola, werderi* Austria, *germanica* Centr. Europe spp. n. p. 6, BÖRNER t.c.
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- Thripsaphis utahensis* sp. n. Utah p. 41, KNOWLTON & HALL Ent. News 61.
- Tranaphis beuthani* sp. n. Germany p. 3, BÖRNER N. eur. Blattl.
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- Yezabura laserpitii, aethusae, kunei* Europe; *annulata* Steiermark, *brancoi* Thuringia spp. n.; *ranunculi* subsp. n. *bulbosi*; *crataegi* subssp. n. *anthrisci*, *aegopodii*; *inculta* subssp. n. *petroselini*, *nudicaulium* Europe p. 5, BÖRNER t.c.

ALEURODIDAE.

List of Aleurodidae of China,
CHOU Ent. sinica 3 1949 17 pp.

Dialeurodes eugeniae larva p. 26 figs., KARAM SINGH Indian J. Ent. 11.—*D. dryandrae* sp. n. Australia p. 85 fig., TAKAHASHI Annot. zool. jap. 23.

Pealius schimae sp. n. Borneo p. 88 fig., TAKAHASHI t.c.

Tetraleurodes pusana India p. 86, *elaearpi* Australia p. 87 spp. n. figs., TAKAHASHI t.c.

COCCIDAE.

New or little known Diaspidinae of Switzerland, BACHMANN & GEIER Mitt. schweiz. ent. Ges. 23 pp. 117-119.

Diaspidinae of France, Europe, N. Africa and Mediterranean region, pt. 2, BALACHOWSKY Actualités sci. indust. no. 1087 163 pp. 41 pls.

Key to genn. of Lacciferinae,
BALACHOWSKY Eos 26 p. 8.

Coccids of Air, Fr. Sudan, BALACHOWSKY Mém. Inst. franç. afr. noire no. 10 p. 313.

Coccids of the USSR, BORKHSENIUS Fn. USSR 7 (Izd. zool. Akad. Nauk SSSR (N.S.) no. 38) 1949 382 pp. 378 figs.

Keys to Coccids of USSR, BORKHSENIUS Keys Fn. SSSR no. 32, 250 pp. 466 figs.

List of Coccids of Sicily, COSTANTINO Boll. Zool. 17 pp. 1-24.

Atlas of scale insects of N. America, Pseudococcidae, pt. 1, FERRIS Atl. Scale Ins. N. Amer. Ser. V vii + 278 pp. 108 figs.

Scale insects collected in China, pts. 1, 2, FERRIS Microentomology 15 pp. 1-34, 20 figs., 70-97, 18 figs.

Coccids from Madagascar, MAMET Mém. Inst. sci. Madagascar 4A pp. 17-38, 8 figs.

Coccids of Ziemia Lubuska, Poland, SZULCZEWSKI Badan. fizjogr. poznań. Tow. Przyj. Nauk 2 pp. 219-224.

Coccidae from Parc nat. Albert, Belg. Congo, VAYSSIÈRE Explor. Parc nat. Albert, Miss. de Witte fasc. 70 p. 5.

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Acantholecanium gen. n. for *Ctenochiton haloxyloni* Hall p. 339, BORKHSENIUS Ent. Obozr. 30 1949.

Aclerda phaseoliformis sp. n. Tadzhikistan p. 341, BORKHSENIUS t.c.—*A. yunnanensis* sp. n. Yunnan p. 16 figs., FERRIS Microentomology 15.

Africaspis aviavyi sp. n. Madagascar p. 30 figs., MAMET Mém. Inst. sci. Madagascar 4A.

Anisococcus gen. n. for *Pseudococcus crawii* Coq. (type), *P. adenosomatiae* Ferr., *P. ephedrae* Coq., *P. quercus* Ehrh. p. 26; *didymus* p. 32,

oregonensis p. 36 spp. n. U.S.A. figs., FERRIS Atl. Scale Ins. N. Amer. Ser. V.

Aspidiotus camelliae, perniciosus see *Hemiberlesiana*; *canariensis, alni* see *Hemiberlesia*; *britannicus, hederae, abietis* see *Dynaspidiotus; ostreaeformis, labiatarum, bavaricus, zonatus, piri* see *Euraspidiotus*; *viticola* see *Paraspidiotus*.

Aspidoproctus Newst. Apr. 1901 (type *Walkeriana pertinax* Newst.) placed on Official List with priority over *Lophococcus* Ckll. Aug. 1901, Bull. zool. Nomen. 4 p. 381.—*A. serrei, xyliæ* see *Misracoccus*.

Asterolecanium longifilum sp. n. Brazil p. 727 figs., BORKHSENIUS C.R. Acad. Sci. URSS (N.S.) 70.—*A. (Bambusaspis* Ckll. a valid subgen.) p. 781, BORKHSENIUS op. cit. 71.—*A. tenax* see *Trachycoccus*.

Aulacaspis Chinese spp. 14 pp. figs., CHOU Ent. sinica 3 1949.

Beesonia quercicola sp. n. China p. 5 figs., FERRIS Microentomology 15.

Beesonidae fam. n. p. 5, FERRIS t.c.

Brevennia femoralis sp. n. Tadzhikistan, Azerbaijan p. 271 figs., BORKHSENIUS Fn. URSS Hom. 7 1949.

Centrococcus bispinus Turkmenia p. 309, *unispinus* Armenia p. 310 spp. n. figs., BORKHSENIUS t.c.

Cerococcus pileae sp. n. Mauritius p. 35 figs., MAMET Proc. R. ent. Soc. Lond. (B) 19.

Ceroputo pannosus sp. n. Crimea p. 288 figs., BORKHSENIUS Fn. URSS Hom. 7 1949.

Chaetococcus turanicus Uzbekistan, Tadzhikistan p. 317, *transcaucasicus* Azerbaijan p. 318 spp. n. figs., BORKHSENIUS t.c.

Chionaspis montana, polypora Kirghizia, Kazakhstan p. 347, *graminella, phragmitidis* Uzbekistan p. 348 spp. n. figs., BORKHSENIUS Ent. Obozr. 30 1949.—*C. salicis* early stages pp. 179-198 figs., VAN DINOTHER Tijdschr. PlZiekt. 56.

Chnaurococcus gen. n. for *Trionymus villosa* Ehrh. (type), *T. trifolii* Forbes p. 40 figs., FERRIS Atl. Scale Ins. N. Amer. Ser. V.

Coccura convexa Maritime Province p. 302, *transcaspica* Turkmenia p. 304 spp. n. figs., BORKHSENIUS Fn. URSS Hom. 7 1949.

Contigaspis monticola Tadzhikistan, *kochiae* Armenia spp. n. p. 349 figs., BORKHSENIUS Ent. Obozr. 30 1949.

Crisicoccus gen. n. for *Pseudococcus pini* Kuw. p. 45 fig., FERRIS Atl. Scale Ins. N. Amer. Ser. V.

Cryptaspidotus juniperi sp. n. Armenia p. 352 fig., BORKHSENIUS Ent. Obozr. 30 1949.

Ctenochiton haloxyloni see *Acanthococcam*.

Diaspidiotus kaussarii sp. n. Iran p. 100 fig., BALACHOWSKY Actualités sci. indust. no. 1087.

Distichlicoccus gen. n. for *Pseudococcus salinus* Ckll. (type) p. 48; *fontanus* sp. n. New Mexico p. 49 figs., FERRIS Atl. Scale Ins. N. Amer. Ser. V.

Drosicha media sp. n. Kazakhstan p. 339, BORKHSENIUS Ent. Obozr. 30 1949.

Drosichiella see *Perissopneumon*.

Duplachionaspis erianthi sp. n. Uzbekistan, Tadzhikistan p. 345 fig., BORKHSENIUS Ent. Obozr. 30 1949.

Dynaspidotus gen. n. for *Aspidiotus britannicus* Newst. (type), *hederae* Vall., *abietis* Schr. pp. 131, 231 figs., THIEM & GERNECK Arb. morph. taxon. Ent. Berl. 1 1934.

Dysmicoccus gen. n. for *Pseudococcus brevipes* Ckll. (type), *P. boninis* Kuw., *P. cuspidatae* Rau, *P. difficilis* Lobd., *P. diodium* McCon., *P. morrisoni* Holl., *P. obesus* Lobd., *P. patulae* Rau, *P. querciculus* Ferr., *P. ryanii* Coq., *P. salmonaceus* Ckll., *P. timberlakei* Ckll. p. 53; *aciculus* sp. n. California p. 55 figs., FERRIS Atl. Scale Ins. N. Amer. Ser. V.

Ehrhornia orientalis sp. n. Maritime Province p. 178, BORKHSENIUS Fn. URSS Hom. 7 1949.

Eriococcus corniculatus sp. n. Yunnan p. 7 fig., FERRIS Microentomology 15.—*E. stenoclini* sp. n. Madagascar p. 26 figs., MAMET Mém. Inst. sci. Madagascar 4A.

Erium irishii see *Spilococcus*.

Eulecanium spiraeae sp. n. Georgia, Armenia p. 340 fig., BORKHSENIUS Ent. Obozr. 30 1949.

Eumargarodes gen. n. p. 397, *laingi* sp. n. Queensland p. 399 figs., JAKUBSKI Ann. Mag. nat. Hist. (12) 3.

Euraspidiotus gen. n. for *Aspidiotus ostreaeformis* Curt. (type), *labiatarum* March., *bavaricus* Ldgr., *zonatus* Frf., *piri* Licht. pp. 131, 231; *gigas* sp. n. Germany pp. 131, 134 etc. figs., THIEM & GERNECK Arb. morph. taxon. Ent. Berl. 1 1934.

Eurycoccus gen. n. for *Pseudococcus jessicae* Holl. (type), *P. olivaceus* Ckll., *P. quaintancei* Tinsl. p. 81 figs., FERRIS Atl. Scale Ins. N. Amer. Ser. V.

Ferrisia see *Ferrisiana*.

Ferrisiana Takah. (= *Ferrisia* Full.) discussed p. 88, FERRIS Atl. Scale Ins. N. Amer. Ser. V.

Filiippia madagascariensis sp. n. Madagascar p. 28 figs., MAMET Mém. Inst. sci. Madagascar 4A.

Fiorinia pinicorticis, *pruinosa* p. 77, *quercifolii* spp. n. Yunnan; *turpiniae* Tak. raised to sp. and not var. of *theae* p. 78 figs., FERRIS Microentomology 15.

Fulbrightia gen. n., *gallicola* sp. n. Yunnan p. 7 figs., FERRIS t.c.

Gossyparia salicicola sp. n. Centr. Asia (Turkmenistan etc.) p. 328 figs., BORKHSENIUS Fn. URSS Hom. 7 1949.

Gueriniella decorata sp. n. Armenia p. 338 figs., BORKHSENIUS Ent. Obozr. 30 1949.

Heliococcus cydoniae Azerbaijan, S. Crimea, Abkhazia p. 272, *montanus* Uzbekistan, Tadzhikistan p. 274, *saxatilis* p. 276, *caucasicus* p. 279 Armenia, *halocnemi* Uzbekistan p. 277, *destructor* Turkmenia, etc. p. 281, *salviae* Tadzhikistan p. 282, *tesquorum* Kazakhstan p. 284 spp. n. figs., BORKHSENIUS Fn. URSS Hom. 7 1949.—*H. osborni* Sand. (= *Phenacoccus pettiti* Holl.) p. 99 fig., FERRIS Atl. Scale Ins. N. Amer. Ser. V.

Hemiberlesiana gen. n. for *Aspidiotus camelliae* Sign. (type), *perniciosus* Comst. pp. 132, 232 figs., THIEM &

GERNECK Arb. morph. taxon. Ent. Berl. **1** 1934.

Hemiberlesiella gen. n. for *Aspidiotus canariensis* Lind. (type), *alni* March. pp. 132, 232 figs., THIEM & GERNECK t.c.

Heterococcopsis opertus sp. n. Tadzhikistan p. 265 figs., BORKHSENIUS Fn. URSS Hom. **7** 1949.

Heterococcus confertus sp. n. Tadzhikistan p. 267 figs., BORKHSENIUS t.c.

Hsuia gen. n. p. 70, *vitrea* sp. n. Yunnan p. 71 fig., FERRIS Microentomology **15**.

Hyalococcus gen. n., *mali* sp. n. Maritime Provinces p. 782 figs., BORKHSENIUS C.R. Acad. Sci. URSS (N.S.) **71**.

Insulaspis gen. n. for *Lepidosaphes vermiculus* Mam. (type) p. 32; *madagascariensis* sp. n. Madagascar p. 33 figs., MAMET Mém. Inst. sci. Madagascar **4A**.

Kermes World distribution pp. 342–346; of Europe and Mediterranean Basin pp. 738–754; key to larvae p. 740 figs., BALACHOWSKY Proc. 8th int. Congr. Ent. Stockholm 1948, 1950.

Koroneaspis lonicerae sp. n. Armenia p. 343 fig., BORKHSENIUS Ent. Obozr. **30** 1949.

Lecanioidiaspis greeni p. 69, *morrisoni* p. 70 spp. n. Riouw Is. figs., TAKAHASHI Insecta matsum. **17**.—*L. elongata* sp. n. Yunnan p. 6 fig., FERRIS Microentomology **15**.

Lecanium kunmingi sp. n. Yunnan p. 73 fig., FERRIS t.c.

Lepidosaphes kirgisica Kazakhstan, Kirghizia p. 341, *pistaciola* Turkmenia, Armenia, *crataegi* Crimea, N. Caucasus, Georgia, Armenia p. 343 spp. n. figs., BORKHSENIUS Ent. Obozr. **30** 1949.—*L. vermiculus* see *Insulaspis*.

Lindingaspis revision pp. 98–124; *ferrisi* China p. 100, *neorossi* New South Wales p. 102, *similis* Samoa p. 105, *tingi* Philippines p. 106 spp. n.; key to spp. p. 108 figs., MCKENZIE Microentomology **15**.

Lineaspis junipericola sp. n. Armenia p. 345 fig., BORKHSENIUS Ent. Obozr. **30** 1949.

Lophococcus see *Aspidoproctus*.

Madagaspis gen. n. p. 34, *pauliani* sp. n. Madagascar p. 35 figs., MAMET Mém. Inst. sci. Madagascar **4A**.

Malaicoccus gen. n. p. 65, *riouvensis* sp. n. Riouw Is. p. 66 figs., TAKAHASHI Insecta matsum. **17**.

Margarodes carvalhoi sp. n. Brazil p. 241 figs., DA COSTA LIMA Mem. Inst. Osw. Cruz **47**.

Marginaspis thevetiae characters p. 107 fig., MCKENZIE Microentomology **15**.

Matsucoccus yunnanensis sp. n. Yunnan p. 12 fig., FERRIS t.c.

Mirococcopsis stipae sp. n. S. Armenia p. 170 figs., BORKHSENIUS Fn. URSS Hom. **7** 1949.

Mirococcus gen. n. for *Phenacoccus inermis* Hall p. 142, BORKHSENIUS Dokl. Acad. Nauk Armenian SSR **7** 1947 [not seen].—*M. clarus* Daghestan p. 182, *longiventris* S. Armenia p. 183 spp. n. figs., BORKHSENIUS Fn. URSS Hom. **7** 1949.

Misracoccus gen. n. for *Aspidoproctus serrei* Vays., *Perissopneumon convexus* Morr. (type), *A. xyiae* Green p. 115; *assamensis* sp. n. Assam p. 117 figs., PRABHAKER RAO Proc. R. ent. Soc. Lond. (B) **19**.

Neomargarodes aristidae Turkmenistan, *rutae* Uzbekistan p. 335, *setosus* Georgia p. 336 spp. n. figs., BORKHSENIUS Ent. Obozr. **30** 1949.

Oracella gen. n. for *Pseudococcus acutus* Lobd. p. 112 fig., FERRIS Atl. Scale Ins. N. Amer. Ser. V.

Orthezia insignis Browne (= *costis* Ghesq. nom. nud.) p. 32, GHESQUIÈRE Bull. Ann. Soc. ent. Belg. **86**.—*O. quadra* sp. n. Yunnan p. 13 fig., FERRIS Microentomology **15**.

Paralecanium key to spp. from Malay Peninsula p. 48; *neomaritimum* p. 49, *album* p. 53, *malainum* p. 54, *pahanense* p. 55 spp. n. Malay Peninsula figs., TAKAHASHI Trans. Kansai ent. Soc. **15** pt. 2.—*P. maculatum* sp. n. Riouw Is. p. 71 fig., TAKAHASHI Insecta matsum. **17**.

Paraputo taraktogeni sp. n. India p. 15 figs., PRABHAKER RAO Indian J. Ent. 9.

Paraspidiotus gen. n. for *Aspidiotus viticola* Leon. p. 231, THIEM & GERNECK Arb. morph. taxon. Ent. Berl. 1 1943.

Parlagena mckenzei sp. n. Baluchistan p. 18 figs., BALACHOWSKY Rev. Path. vég. Ent. agric. Fr. 29.

Parlatoria yunnanensis sp. n. Yunnan p. 76 fig., FERRIS Microentomology 15.—*P. asiatica* sp. n. Kazakhstan p. 341 fig., BORKHSENIUS Ent. Obozr. 30 1949.

Paroudabilis querulus sp. n. Azerbaijan p. 239 figs., BORKHSENIUS Fn. URSS Hom. 7 1949.—See *Phenacoccus*.

Peliococcus manifestus p. 245, *glandulifer* p. 259 Azerbaijan, Armenia, *pseudozillae* Kazakhstan, Uzbekistan p. 248, *bitubulatus* Tadzhikistan, Armenia p. 251, *armeniacus* Armenia p. 253, *terrestris* Georgia p. 254, *perfidiosus* Ukraine, Crimea, N. Caucasus p. 257 spp. n. figs., BORKHSENIUS Fn. URSS Hom. 7 1949.

Perissopneumon Newst. (= *Drosichella* Morr.) status discussed p. 114; *ferox* further characters p. 115 figs., PRABHAKER RAO Proc. R. ent. Soc. Lond. (B) 19.—*P. converxus* see *Misracoccus*.

Peukinococcus see *Phenacoccus*.

Phenacoccopsis nasonovi sp. n. Leningrad p. 201 figs., BORKHSENIUS Fn. URSS Hom. 7 1949.

Phenacoccus Ckll. (= *Paroudabilis* Ckll., *Peukinococcus* Sulé) p. 120; *capensis* Mexico p. 131, *defectus* p. 137, *eremicus* p. 139, *pauperatus* p. 154, *picrospinus* p. 156 California spp. n.; *dearnessi* King (= *cockerelli* King, *betheli* Ckll.) p. 135; *solenopsis* Tins. (= *cevalliae* Ckll.) p. 161 figs., FERRIS Atl. Scale Ins. N. Amer. Ser. V.—*P. prodigalis* sp. n. China p. 9 fig., FERRIS Microentomology 15.—*P. polyphagus* Vladivostok p. 213, *perillistris* Kazakhstan, Tadzhikistan, *kareliniae* p. 215, *abditus* p. 226, *tibialis* p. 227, *larvalis* p. 236 Tadzhikistan, *strigosus* p. 217, *persimplex* p. 221 Turkmenia, *avenae* p. 217, *bicerarius* p. 225, *avetiana* p. 230 Armenia, *ferulae* p. 219, *cynodontis*

p. 229 Uzbekistan, Tadzhikistan, *angustatus* Kirghizia, Tadzhikistan p. 222, *setiger* p. 223 S.E. European Russia, Kazakhstan, *poriferus* Maritime Province p. 234, *memorabilis* Uzbekistan p. 235 spp. n. figs., BORKHSENIUS Fn. URSS Hom. 7 1949.—*P. ramonae*, *bahiae* see *Puto yuccae*; *pettiti* see *Heliooccus osborni*; *inermis* see *Mirococcus*.

Pinnaspis indivisa sp. n. Yunnan p. 76 fig., FERRIS Microentomology 15.

Planococcus gen. n. for *Pseudococcus citri* Risso (type), *P. kraunhiae* Kuw., *P. crotonis* Green, *P. tayabamius* Ckll., *P. lilacinus* Ckll., *P. kenyae* Le P., *P. citrioides* Ferr. p. 164 figs., FERRIS Atl. Scale Ins. N. Amer. Ser. V.

Platylecanium key to spp. from Malay Peninsula p. 57; *mesuae* p. 58, *cyperi* p. 59 spp. n. Malay Peninsula figs., TAKAHASHI Trans. Kansai ent. Soc. 15 pt. 2.

Porphyrophora monticola Armenia p. 336, *minuta* S. Crimea, *ussuriensis* Maritime Province p. 337 spp. n. figs., BORKHSENIUS Ent. Obozr. 30 1949.

Pseudaspidoproctus armeniacus sp. n. Armenia p. 338 fig., BORKHSENIUS t.c.

Pseudococcus nomenclature discussed p. 170; *malacearum* sp. n. California p. 185 figs., FERRIS Atl. Scale Ins. N. Amer. Ser. V.—*P. expressus* p. 115, *junipericola* p. 116, *intutus* p. 123, *rectus* p. 136, *isfarensis* p. 152, *copiosus* p. 156 Tadzhikistan, *flavus* p. 117, *parvulus* p. 122, *moricola* (also Uzbekistan) p. 128, *implicatus* p. 144 Kazakhstan, *pacificus* p. 119, *hemisphaericus* p. 147 Maritime Province, *impeditus* Transcaucasia p. 124, *fuscus* E. Turkmenia p. 125, *indigens* S.E. European Russia p. 126, *centaureae* p. 129, *kirgisicus* p. 141, *calamagrostidis* p. 143, *ferganensis* p. 155 Kirghizia, *multisetiger* Altai, Maritime Province p. 137, *elymi* S.E. European Russia, N.W. Kazakhstan p. 146, *turgidus* Azerbaijan p. 148, *hamberdi* p. 154, *artemisiarum* p. 160 Armenia, *gracilipes* N. Caucasus p. 155, *parvus* Ukraine, Georgia, *placatus* Ukraine

p. 158, *graminellus* Leningrad p. 145 spp. n. figs., BORKHSENIUS Fn. URSS Hom. 7 1949.—*P. citri* all stages p. 160, PORTELA FEIJÃO Agronomia angolana no. 4.—*P. crawii*, *adenostomae*, *ephedrae*, *quercus* see *Anisococcus*; *pini* see *Crisicoccus*; *salinus* see *Distichlicoccus*; *brevipes*, *boninsis*, *cuspitatae*, *difficilis*, *diodium*, *morrisoni*, *obesus*, *patulae*, *quercicolus*, *ryani*, *salmonaceus*, *timberlakei* see *Dysmicoccus*; *jessica*, *olivaceus*, *quaintancei* see *Eurycooccus*; *acutus* see *Oracella*; *citri*, *kraunhiae*, *crotonis*, *tayabanus*, *lilacinus*, *kenyae*, *citrioides* see *Planococcus*; *gutierreziae*, *andersoni* (*dudleyi*), *erigoni*, *juniperi*, *prosopidis*, *sequoiae*, *steelii*, *townsendi* see *Spilococcus*; *junceus* see *Trionymus*.

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Puto arctostaphyli p. 195, *bryanthi* p. 199 California, *ulter* Guatemala p. 211 spp. n.; *mexicanus* Ckll. (= *koebelei* Ehrh.) p. 208; *yuccae* Ckll. (= *y.* var. *ceanothi* Ckll.), *Phenacoccus ramonae* Essig, *P. bahiae* Ehrh.) p. 213 figs., FERRIS Atl. Scale Ins. N. Amer. Ser. V.

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Rhizaspidiotus porifera Armenia p. 350, *albatus* Turkmenia p. 351 spp. n. figs., BORKHSENIUS Ent. Obozr. 30 1949.

Rhizococcus kondarensis Tadzhikistan, Uzbekistan p. 353, *oblongus* p. 358, *obscurus* p. 360, *salsolae* p. 363 Tadzhikistan, *agropyri* Kazakhstan, *graminicola* Uzbekistan p. 359 spp. n. figs., BORKHSENIUS Fn. URSS Hom. 7 1949.

Rhizoecus vitis Crimea p. 175, *ornatus* Armenia p. 176, *tritici* S.E. European Russia p. 177 spp. n. figs., BORKHSENIUS t.c.

Saccharicoccus gen. n. for *Trionymus sacchari* Ckll. p. 216, FERRIS Atl. Scale Ins. N. Amer. Ser. V.

Selenaspidus antsingyi sp. n. Madagascar p. 37 figs., MAMET Mém. Inst. sci. Madagascar 4A.

Sishania gen. n. p. 12, *nigropilata* sp. n. Yunnan p. 13 figs., FERRIS Microentomology 15.

Spilococcus gen. n. for *Pseudococcus gutierreziae* Ckll. (type), *P. andersoni* Colem., *P. erigoni* Ehrh., *P. juniperi* Ehrh., *P. prosopidis* Ckll., *P. sequoiae* Colem., *P. steelii* Ckll. & Tns., *P. townsendi* Ckll., *Erium irishii* Ckll. p. 219; *implicatus* p. 227, *larreae* p. 233, *pressus* p. 235 spp. n. California; *andersoni* Colem. (= *P. dudleyi* Colem.) p. 221 figs., FERRIS Atl. Scale Ins. N. Amer. Ser. V.

Spinococcus tuberculatus sp. n. Khabarovsk (Far East) p. 207 figs., BORKHSENIUS Fn. URSS Hom. 7 1949.

Steingelia orientalis sp. n. Maritime Province p. 334 figs., BORKHSENIUS Ent. Obozr. 30 1949.

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Trachycoccus gen. n. for *Astrolecanium tenax* Bod. p. 781, BORKHSENIUS C.R. Acad. Sci. URSS (N.S.) 71.

Tridiscus gen. n. for *Trionymus distichlii* Ferr. p. 248 figs., FERRIS Atl. Scale Ins. N. Amer. Ser. V.

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Tylococcus harongae sp. n. Madagascar p. 24 figs., MAMET Mém. Inst. sci. Madagascar 4A.

THYSANOPTERA.

Brazilian Thysanoptera, II, HOOD Rev. Ent., Rio de J. 21 pp. 1-113.

Thysanoptera of Egypt, XV, PRIESNER Bull. Soc. Fouad 1er Ent. 34 pp. 25-37, 14 figs.

Actinothrips femoralis sp. n. Brazil p. 5 figs., HOOD Rev. Ent., Rio de J. 21.

Adraneothrips spadix p. 58, *acutus* p. 60, *brasiliensis* p. 64, *silvaticus* p. 68, *obliquus* p. 71, *transversus* p. 74, *septimanus* p. 77, *tupi* p. 80, *pulchellus* p. 83, *lepidus* p. 87 spp. n. Brazil figs., HOOD t.c.

Aeolothrips revision of British spp. pp. 53–57 (34 1949), pp. 56–57 (35 1950); *fasciatus* L. (= *propinquus* Bagn., *intermedius* Bagn.); *tenuicornis* Bagn. (= *anthyllidis* Bagn., *clavicornis* Bagn.) p. 55 (34 1949), SPEYER & PARR Rep. exp. Sta. Cheshunt.

Anactinothrips borgmeieri sp. n. Brazil p. 34 figs., HOOD Rev. Ent., Rio de J. 21.

Aulothrips gen. n. (also in error as *Autothrips*) (nr. *Haplothrips*) *nubicus* sp. n. Egypt p. 70 fig., PRIESNER Bull. Soc. Fouad 1er Ent. 34.

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Eupathithrips atripes sp. n. Brazil, Peru p. 31 figs., HOOD Rev. Ent., Rio de J. 21.

Eurythrips morulops p. 96, *costalimai* p. 99, *subflavus* p. 102, *valens* p. 104, *setosus* p. 108 spp. n. Brazil figs., HOOD t.c.

Exothrips tenellus sp. n. Egypt p. 30 figs., PRIESNER Bull. Soc. Fouad 1er Ent. 34.

Frankliniella nigripes Gir. (= *lycopersici* Andrewartha) p. 592, JENSEN Proc. Hawaii. ent. Soc. 12 1946.

Gastrothrips ocelloides p. 9, *annulipes* p. 13, *variipes* p. 16, *plaumannii* p. 20, *paulistarum* p. 25 spp. n. Brazil figs., HOOD Rev. Ent., Rio ed J. 21.

Haplothrips hukkineni Egypt, Palestine, Albania etc. p. 34 (with f. n. *phragmitis* Hungary, Jugoslavia, Albania p. 35), *anthemidinus* p. 71, *amygdali* p. 82 Palestine, *jasionis* Austria, England p. 73, *purpurifer* Spain p. 74, *alpicola* Austria p. 75, *quercinus* Cyprus p. 76, *avenae* Nyasaland p. 78, *confinis* Sudan, Senegal p. 79, *gallarum* p. 80, *balachowskyi* p. 86, *maroccanus* p. 87 Morocco, *siwanus* Siwa Oasis p. 83, *salvadorae* Hedjas p. 84, *constrictus* Belg. Congo p. 85 spp. n.; *tolerabilis* further description p. 88; keys to subgenn. & allied genn. p. 91 figs., PRIESNER Bull. Soc. Fouad 1er Ent. 34.

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Ischyrothrips menoni sp. n. S. India p. 9 figs., ANANTHAKRISHNAN Indian J. Ent. 11.

Leptothonips tenuiceps sp. n. Brazil p. 93 figs., HOOD Rev. Ent., Rio de J. 21.

Lissothrips obesus sp. n. Brazil p. 38 figs., HOOD t.c.

Neoheegeria verbasci wing hooks p. 445 fig., WICK Proc. Iowa Acad. Sci. 55 1948.

Phthirothrips brevisetis sp. n. Brazil p. 28 figs., HOOD Rev. Ent., Rio de J. 21.

Plesiothrips sculpticollis p. 1, *setiventris* (also Cuba) p. 3 spp. n. Brazil figs., HOOD t.c.

Puelothrips gen. n. (Phlaeothriidae) p. 143, *minuta* sp. n. Mexico p. 145 figs., STANNARD Proc. ent. Soc. Wash. 52.

Sagenothrips hylaeus sp. n. Brazil p. 111 figs., HOOD Rev. Ent., Rio de J. 21.

Scolothrips revision pp. 39–68, emended description p. 41; *hoodi* Washington p. 45, *rhagebianus* Egypt p. 46, *indicus* S. India p. 48, *takahashii* Formosa p. 52, *hartwigi* Transvaal p. 53, *latipennis* Egypt, Crimea p. 54 spp. n.; *longicornis*

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Watsoniella jonesiana n. n. for *flavipes* Jones nec Moulton p. 187, COTT Pan-Pacif. Ent. **26**.

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Haematopinus quadripertusus distinguishing characters from *eurysternus* p. 136 figs., ROBERTS Aust. vet. J. **26**.

Hoplopleura akanezumi sp. n. Japan p. 716 figs., SASA J. exp. Med., Tokyo **20**.—*H. acanthopus* subsp. n. *fahrenholzi* (on *Sylvaemus salvaticus*) [? Silesia] p. 337, EICHLER Z. hyg. Zool. **38**.

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Pterophthirus wernecki sp. n. (on *Proechimys i. iheringi*) Brazil p. 83 figs., GUIMARÃES Papéis avulsos Dep. Zool. S. Paulo **9**.

MALLOPHAGA.

Neotropical Mallophaga, VI, VIII, CARRIKER Rev. brasil. Biol. **10** pp. 1-21, 46 figs., 163-188, 46 figs.

Review of species of Mallophaga described by Linnaeus (1758 & 1761) and Geoffroy (1762), CLAY & HOPKINS Bull. Brit. Mus. (Nat. Hist.) Ent. **1** pp. 221-272, 2 pls. 63 figs.

First supplement to Kéler's bibliography of Mallophaga, EICHLER Z. angew. Ent. **31** pp. 617-635.

List of type-hosts of Mallophaga and the lice described from them, THOMPSON Ann. Mag. nat. Hist. (12) **3** pp. 269-287, 365-382, 717-724.

Mallophaga of Japan and adjacent territories, Ischnocera pt. I, Philopteridae (key to genera p. 306), UCHIDA Jap. med. J. **1** no. 4 1948 pp. 303-326, no. 6 (1948) 1949 pp. 535-556, 17 figs.

Mallophaga of mammals, II, WERNER Malof. Mam. pt. II [5+] 207 pp. 316 figs.

Amyrsidea revision of New World spp. pp. 492-510; *simplex* sp. n. (on *Crax annulata*) Colombia p. 494 (with subssp. n. *rubra* (on *Crax r. rubra*) Panama p. 495, *pauensis* (on *Pauxi pauxi gilliardi*) Colombia); *parvispina* sp. n. (on *Pauxi pauxi unicornis*) Bolivia p. 496; *spinigaster* sp. n. (on *Crax nigra*) p. 497 (with subssp. n. *daubentoni* (on *Crax alberti daubentoni*) Venezuela, *alberti* (on *Crax a. alberti*) Colombia p. 498); *semicracis* sp. n. (on *Penelope argyrotis columbiana*) (with subssp. n. *perijana* (on *Penelope argyrotis albicauda*) Colombia p. 500, *purpurascens* (on *Penelope p. purpurascens*) Mexico p. 501, *brunnescens* (on *Penelope purpurascens brunnescens*), *aburris* (on *Aburria aburri*) Colombia, *jacquaçu* (on *Penelope obscura jacquaçu*) p. 502, *chamaepeta* (on *Chamaepetes goudotii rufiventris*) Peru, *sanctae-martae* (on *Chamaepetes goudotii sanctae-martae*) Colombia p. 504, *guttata* (on *Chamaepetes unicolor*) Costa Rica p. 505); *spicula* sp. n. (on *Ortalis v. vetula*) Mexico (with subssp. n. *garruli* (on *Ortalis g. garrula*) p. 506, *microspina* (on *Ortalis r. ruficirissa*) p. 507 Colombia); *praegracilis* sp. n. (on *Odontophorus gujanensis polionotus*) Colombia p. 507 (with subssp. n. *gujanensis* (on *Odontophorus g. gujanensis*), *cumbrensis* (on *Odontophorus columbianus*) Venezuela p. 509) figs., CARRIKER Rev. Acad. colombiana **7**.

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Bovicola zuluensis sp. n. (on *Equus burchelli antiquorum*) S. Africa p. 88 figs., WERNECK Malof. Mam. pt. II.

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Capraiella piageti n. n. for *subcuspidiatus* Piag. nec Nitzsch p. 57, EICHLER Zool. Anz. 141 1943.

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Colpocephalum ferrisi host discussed p. 237, HOPKINS Ann. Mag. nat. Hist. (12) 3.—*C. menoponoides* see Kurodaria.

Columbicola Ewing (= *Phagopterus* Fr. & Du.) p. 339 figs., GUIMARÃES Papéis avulsos Dep. Zool. S. Paulo 9.—*C. columbae* L. (= *Lipeurus baculus* Nitzsch); *bacillus* Gieb. (= *L. baculus* de Haan, b. Burm., b. Gieb.) p. 230; *taschenbergi* Eichl. (= *baculus* Tasch.) p. 232, HOPKINS Ann. Mag. nat. Hist. (12) 3.—*C. mjobergi* sp. n. (on *Geopelia s. striata*) Sumatra p. 58, EICHLER Zool. Anz. 141 1943.

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Cyclotogaster heterographus f. *obscurior* n. n. for *obscurus* Gieb. nec Rudow p. 230, HOPKINS Ann. Mag. nat. Hist. (12) 3.

Damalinia forficula subsp. n. *siamensis* (on *Muntiacus muntjak curvostylis*) Siam, Burma, Borneo p. 133; *traguli* sp. n. (on *Tragulus borneanus*) Borneo, Sumatra p. 140 figs., WERNECK Malof. Mam. pt. II.

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Psocoptera of cruise of "Bougainville" to French Antarctic Is., BADONNEL Mém. Mus. Hist. nat., Paris (N.S.) **20** 1947 pp. 25-30, 15 figs.

Validity of major grouping of Pearman of Corrodentia discussed, BROADHEAD Trans. R. ent. Soc. Lond. **101** pp. 335-339.

Tasmanian Psocoptera, EDWARDS Pap. roy. Soc. Tasm. **1949** pp. 93-134, 117 figs.

Antarctopsocus gen. n. p. 26, *jeanneli* sp. n. Marion I. p. 27; early stages p. 29 figs., BADONNEL Mém. Mus. Hist. nat., Paris (N.S.) **20** 1947.

Caecilius quercus sp. n. Tasmania p. 131 figs., EDWARDS Pap. roy. Soc. Tasm. **1949**.

Clematostigma tardipes sp. n. Tasmania p. 95 figs., EDWARDS t.c.

Interpsocus gen. n. (Peripsocidae), *brunneus* sp. n. Tasmania p. 126 figs., EDWARDS t.c.

Liposcelis revision pp. 335-388, key to spp. p. 347, list p. 383; *simulans* (race A p. 352, race B p. 356), *myrmecophilus* p. 363, *rufus* p. 366, *paetulus* p. 378 spp. n. England; *formicarius* Hag. (= *silvarum* Kolbe) p. 361; *terricolis* Bad. (= *luridus* Broadb.) p. 369 figs., BROADHEAD Trans. R. ent. Soc. Lond. **101**.

Myopsocus characters; *australis* p. 100, *griseipennis* p. 104 redescriptions figs., EDWARDS Pap. roy. Soc. Tasm. **1949**.

Peripsocus key to Swedish spp. p. 197 figs., NYHOLM Ent. Tidskr. **71**.—*P. eucalypti* p. 122, *macropodus* p. 124 spp. n. Tasmania figs., EDWARDS Pap. roy. Soc. Tasm. **1949**.

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Tricladellus froggatti var. n. *brachypterus* p. 113; *nitens* var. n. *brachypterus* p. 115 Tasmania figs., EDWARDS t.c.

ISOPTERA.

Phylogeny of termite genera based on imago-worker mandibles, AHMAD Bull. Amer. Mus. nat. Hist. **95** pp. 41-86, 17 figs.

Termites of Madagascar, CACHAN Nat. Malgache **2** pp. 111-117, 2 pls. 20 figs.

Fossil termites of the U.S.A. and their living relatives, SNYDER Proc. ent. Soc. Wash. **52** pp. 190-193.

Cornicapritermes gen. n., *mucronatus* sp. n. Br. Guiana p. 13 fig., EMERSON Amer. Mus. Novit. no. 1444.

Cryptotermes of S. Africa pp. 3-32, key p. 27; *merwei* p. 5, *havilandi* p. 12, *brevis* p. 18 redescriptions; *naudei* sp. n. N. Zululand p. 24 figs., COATON J. ent. Soc. sthn Africa **13**.

Genuotermes gen. n., *spinifer* sp. n. Brazil p. 5 fig., EMERSON Amer. Mus. Novit. no. 1444.

Glossotermes gen. n., *oculatus* sp. n. Br. Guiana p. 2 fig., EMERSON t.c.

Odontotermes magdalena sp. n. W. Africa p. 138 figs., GRASSÉ & NOIROT Ann. Sci. nat., Paris Zool. (11) **12**.

Quasitermes gen. n., *caprinus* sp. n. Madagascar p. 10 fig., EMERSON Amer. Mus. Novit. no. 1444.

Reticulitermes flavipes subsp. n. (or var. n.) *santonensis* France, U.S.A. p. 380, FEYTAUD Proc. 8th int. Congr. Ent. Stockholm 1948, 1950.

Spicotermes gen. n., *brevicarinatus* sp. n. Br. Guiana p. 6 fig., EMERSON Amer. Mus. Novit. no. 1444.

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PLECOPTERA.

World distribution of Plecoptera, AUBERT C.R. 13^e Congr. int. Zool. Paris 1948, 1949 pp. 468–469.

Plecoptera of the Caucasus, BALINSKY Trans. R. ent. Soc. Lond. 101 pp. 59–87, 21 figs.

Some Plecoptera from Assam, KIMMINS Ann. Mag. nat. Hist. (12) 3 pp. 194–209, 17 figs.

British Plecoptera, KIMMINS Handb. Ident. Br. Ins. 1 pt. 6, 18 pp. 49 figs.

Families, subfamilies and systematic list of genera of Plecoptera, RICKER Proc. Indiana Acad. Sci. 59 pp. 197–209, 1 fig.

Stoneflies of China, Wu Peking nat. Hist. Bull. 16 1948 pp. 265–272, 1 pl.; 17 1948 pp. 75–80, 1 pl., 145–150, 1 pl., pp. 251–256 (1949), 2 pls.

EUSTHENIIDAE.

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Protonemura medialis p. 77, *gladifera* p. 79, *viridis* p. 80 spp. n. Caucasus figs., BALINSKY Trans. R. ent. Soc. Lond. 101.—*P. falcata* p. 196, *scutigera* p. 199, *mclachlani* p. 200, *mishmica* p. 203, *quadridentata* p. 205 spp. n. Assam figs., KIMMINS Ann. Mag. nat. Hist. (12) 3.

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 Trans. R. ent. Soc. Lond. **101**.

EPHEMEROPTERA (PLECTOPTERA).

Mayflies of Florida, BERNER xii &
 267 pp. 24 pls. 88 figs. 19 maps.

Australian Ephemeroptera, Part I,
 revision of New South Wales spp.,
 and check list of Australian spp. (incl.
 Tasmania), HARKER Proc. Linn. Soc.
 N.S.W. **75** pp. 1-34, 101 figs.

British Ephemeroptera, KIMMINS
 Handb. Ident. Br. Ins. **1** pt. 9, 18 pp.
 55 figs.

Key to genn. of nymphs of
 Ephemeroptera in Dallas County,
 Texas with key to genn., MOORE
 Field & Lab. **18** pp. 103-112, 9 figs.

Notes on neotropical Ephemeroptera
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 J. **21** pp. 593-614, 22 figs.

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Campsurus ulmeri sp. n. Brazil p.
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 Brazil p. 604 figs., TRAVER t.c.

LEPTOPHLEBIIDAE.

Atalonella characters p. 30, HAR-
 KER Proc. Linn. Soc. N.S.W. **75**.

Atalophlebia longicaudata p. 9,
marowana p. 12, *maculosa*, *incerta*
 p. 13, *parva* p. 14 spp. n. New South
 Wales; *albiterminalis* further descrip-
 tion p. 10 figs., HARKER t.c.

Deleatidium annulatum sp. n. New
 South Wales p. 19 figs., HARKER t.c.

Leptophlebia crassa sp. n. New
 South Wales p. 17 figs., HARKER t.c.

Thraulodes ulmeri sp. n. Brazil
 p. 553 figs., EDMUNDS Rev. Ent.,
 Rio de J. **21**.

Thraulus ehrhardti, *maculipennis*,
primanus, *versicolor* see *Traverella*.

Traverella ehrhardti Ulmer, *macu-*
lipennis U., *primanus* Eaton, *ver-*
color E. from *Thraulus* p. 551 figs.,
 EDMUNDS Rev. Ent., Rio de J. **21**.

EPHEMERELLIDAE.

Chitonophora sp. larva p. 19 figs.,
 GRENIER & VERRIER Bull. Soc. ent.
 Fr. **55**.

BAËTIDAE.

Baëtis descriptions of nymphs of
 British spp. pp. 143-166 figs., MACAN
 Trans. Soc. Brit. Ent. **10**.—*B.
 hiemalis* sp. n. Michigan p. 155 figs.,
 LEONARD Ann. ent. Soc. Amer. **43**.—

B. baddamsae p. 21, *confluens* p. 23
spp. n. New South Wales figs.,
HARKER Proc. Linn. Soc. N.S.W. 75.

Baetodes nymph p. 204; *spiniferum* ♂ p. 205, EDMUNDS Ent. News 61.

ECDYONURIDAE.

Afronurus harrisoni variations p. 22 fig., HARRISON Piscator 4.

Atopopus spadix sp. n. New South Wales p. 27 figs., HARKER Proc. Linn. Soc. N.S.W. 75.

Ecdyonurus larval characters p. 88; *lateralis* larva p. 85 figs., BAYARD & VERRIER Bull. Soc. zool. Fr. 75.—*E.* sp. larva p. 230 fig., BERTRAND & VERRIER Vie et Milieu 1.

ODONATA

(PARAEUROPTERA).

Distribution and phenology of boreo-alpine Odonata of W. Palaearctic, ANDER Opusc. ent., Lund 15 pp. 53–71, 2 figs.

Dragonflies of Mississippi, BICK Amer. Midl. Nat. 43 pp. 66–78, 1 fig.

Odonata of Nova Scotia, COOK Canad. Ent. 82 pp. 190–194.

Odonata from Liberia, FRASER Bull. Inst. franç. Afr. noire 12 pp. 611–624, 4 figs.

Odonata of the New Forest, FRASER J. Soc. Brit. Ent. 3 pp. 138–148.

Odonata of Air, Fr. Sudan, FRASER Mém. Inst. franç. Afr. noire no. 10 pp. 108–114, 2 figs.

Odonata of Siwa Oasis, Libyan Desert, Expedition 1935, KIMMINS Bull. Soc. Fouad 1er Ent. 34 pp. 152–154, 4 figs.

J.J.F.X. King collection of British Odonata, O'FARRELL Entomologist 83 pp. 14–18, 119.

Notes on some rare dragonflies, PINNIGER Trans. S. Lond. ent. nat. Hist. Soc. 1948–49 pp. 161–164, 1 pl.

Some Odonata from Kenora and Rainy River districts, Ontario, WALKER Canad. Ent. 82 pp. 16–21.

Zygoptera.

AGRIIDAE.

Psolodesmus dorothea Wilms., *kuroiwae* Mats. & Og. subspp. of *mandarinus* McL. pp. 28, 30 figs., CHEN Quart. J. Taiwan Mus. 3.

Sapho puella Sjöst. from *Umma* p. 618, FRASER Bull. Inst. franç. Afr. noire 12.

Umma saphirina Först. redescription p. 172; *mesostigma* Selys characters p. 176 figs., KIMMINS Ann. Mag. nat. Hist. (12) 3.—*U. puella* see *Sapho*.

CHLOROCYPHIDAE.

Survey of Chlorocyphidae (list of spp. p. 268), LAIDLAW Trans. R. ent. Soc. Lond. 101 pp. 257–280, 8 figs.

Aristocyppha gen. n. for *Rhino-cypha quadrimaculata* Selys (type) & others p. 273, LAIDLAW Trans. R. ent. Soc. Lond. 101.

Chlorocypha fitzsimonsi sp. n. Natal p. 270 figs., PINHEY Ann. Transv. Mus. 21.—*C.* key to ♂♂ p. 9; *aphrodite* Le Roi & *crocus* Longfield distinct spp. p. 13; *gracilis* Karsch distinct sp. not syn. of *dispar* P. de B. p. 15 figs., FRASER Bull. Inst. Sci. nat. Belg. 26 no. 18.

Cyrano asiatica Selys (type of genus) from *Libellago* p. 17, FRASER t.c.

Heterocypha gen. n. for *Rhino-cypha vitrinella* Fras. p. 273, LAIDLAW Trans. R. ent. Soc. Lond. 101.

Libellago asiatica see *Cyrano*.

Melanocypha snellemanni subsp. n. *javana* Java p. 274 figs., LAIDLAW Trans. R. ent. Soc. Lond. 101.

Pachycypha gen. n. p. 631, *aurea* sp. n. Borneo p. 634 figs., LIEFTINCK Treubia 20.

Platycypha key to ♂♂ p. 2; *auripes* ♂ re-described p. 4, ♀ p. 5; *pinheyi* (F.) p. 6, *greenwayi* (PINHEY) p. 18 spp. n. Tanganyika figs., FRASER Bull. Inst. Sci. nat. Belg. 26 no. 18.

Rhinocypha list of all spp. & subspp. p. 277, LAIDLAW Trans. R. ent. Soc. Lond. 101.—*R. petiolata* see *Sundacypha*; *quadrimaculata* &

others see *Aristocypha*; *vitrinella* see *Heterocypha*.

Sundacypha gen. n. for *Rhinocypha petiolata* Selys p. 272, LAIDLAW Trans. R. ent. Soc. Lond. **101**.

SYNLESTIDAE.

Chlorolestes elegans sp. n. Transvaal, S. Rhodesia p. 260 figs., PINHEY Ann. Transv. Mus. **21**.

Megalestes mirabilis see *Orolestes*.

Orolestes mirabilis Mats. from *Megalestes* p. 24; *koxingai* sp. n. Taiwan p. 25 figs., CHEN Quart. J. Taiwan Mus. **3**.

LESTIDAE.

Lestes sponsa field and laboratory characters of nymph p. 103 figs., MACNEILL Ent. mon. Mag. **86**.—*L. pallidus* Ramb. xerophilous form; *confusus* n. n. for *pallidus* Nav. nec Ramb. p. 109, FRASER Mém. Inst. franç. Afr. noire no. 10.

MEGAPODAGRIIDAE.

Podolestes key to Malaysian spp. p. 39; *atomarius* p. 41, *furcifer* p. 44 spp. n. Borneo figs., LIEFTINCK Zool. Meded. **31**.

PLATYCNEMIDAE.

Platycnemis guttifera sp. n. Liberia p. 615 figs., FRASER Bull. Inst. franç. Afr. noire **12**.

Taolestes nectans nymph p. 155, NEEDHAM Peking nat. Hist. Bull. **16** 1948.

COENAGRIIDAE.

Agriocnemis amelia see *Ischnura delicata*.

Coenagrion ramburi sp. n. Mauritius p. 70 fig., FRASER Proc. R. ent. Soc. Lond. (B) **19**.

Coenagrion scitulum egg, nymphal stages p. 97 figs., FRASER Ent. mon. Mag. **86**.

Enallagma sapphirina sp. n. Transvaal, Natal p. 267 figs., PINHEY Ann. Transv. Mus. **21**.—*E. cyathigerum* nymph p. 234 figs., MACNEILL Ent. mon. Mag. **86**.

Ischnura delicata Hagen (= *Agriocnemis amelia* Ndm.) p. 155, NEEDHAM Peking nat. Hist. Bull. **16** 1948.—*I. evansi*, *fountainei* distinguishing

characters p. 151 figs., KIMMINS Bull. Soc. Fouad Ier Ent. **34**.

Pseudagrion assegai p. 261, *makabusiensis* p. 263 Transvaal, S. Rhodesia, *nigerrimum* S. Rhodesia Port. E. Africa p. 265 spp. n. figs., PINHEY Ann. Transv. Mus. **21**.

Anisoptera.

Anisoptera of Mauritius, FRASER Proc. R. ent. Soc. Lond. (B) **19** pp. 72-77.

GOMPHIDAE.

Wing venation of Chinese Gomphidae, NEEDHAM Peking nat. Hist. Bull. **16** 1948 pp. 143-156 figs.

Burmagomphus dolus Ndm., *campestris* Ndm. from *Gomphus* p. 148 figs., NEEDHAM Peking nat. Hist. Bull. **16** 1948.

Davidius serenus sp. n. China p. 154 figs., NEEDHAM t.c.

Eogomphus gen. n. for *Gomphus neglectus* Ndm. p. 146 (further description p. 147) figs., NEEDHAM t.c.

Gastrogomphus gen. n. for *Gomphus abdominalis* McL. p. 145 figs., NEEDHAM t.c.

Gomphoides albrighti sp. n. Texas p. 1 fig., NEEDHAM Trans. Amer. ent. Soc. **76**.

Gomphurus gideon sp. n. Szechuan p. 153 figs., NEEDHAM Peking nat. Hist. Bull. **16** 1948.

Gomphus Chinese spp. pp. 149-150 figs., NEEDHAM t.c.—*G. australis* p. 36, *cavillaris* p. 37, *minutus* p. 38 nymphs figs., WESTFALL Florida Ent. **33**.—*G. diminutus* p. 6, *hodgesi* p. 8 spp. n. U.S.A. figs., NEEDHAM Trans. Amer. ent. Soc. **76**.—*G. abdominalis* see *Gastrogomphus*; *agricola*, *succumbens*, *citimus*, *lautus*, *svan-hedini*, *chichibui*, *melampus* see *Xenogomphus*; *neglectus* see *Eogomphus*; *torpens* see *Merogomphus*; *dolus*, *campestris* see *Burmagomphus*; *brevipennis* see *Mesogomphus*.

Merogomphus torpens Ndm. from *Gomphus* p. 148 figs., NEEDHAM Peking nat. Hist. Bull. **16** 1948.

Mesogomphus brevipennis Ndm. from *Gomphus* p. 148 figs., NEEDHAM t.c.

Paragomphus sabicus sp. n. S. Rhodesia p. 270 figs., PINHEY Ann. Transv. Mus. 21.

Xenogomphus gen. n. for *Gomphus agricola* Selys (type), *G. succumbens* Ndm., *G. citimus* Ndm., *G. laetus* Ndm., *G. sven-hedini* Sjöst., *G. chichibui* Fras., *G. melampus* Selys p. 146 figs., NEEDHAM Peking nat. Hist. Bull. 16 1948.

AESHNIDAE.

Last nymphal stage of some European Aeschnidae. SCHMIDT Opusc. ent., Lund 15 pp. 193–201, 6 figs.

Aeshna nymphal characters p. 200 figs., SCHMIDT Opusc. ent., Lund 15.—*A. mixta* nymphal instars p. 129 figs., GARDNER Ent. Gaz. 1.

Boyeria macclachlani, *irene* nymphs pp. 197–198 figs., SCHMIDT Opusc. ent., Lund 15.

Brachytron hafniense nymph p. 200 figs., SCHMIDT t.c.

Caliaeschna microstigma nymph p. 198 figs., SCHMIDT t.c.

CORDULEGASTERIDAE.

Chlorogomphus revision of spp. of Eastern China pp. 137–150, key p. 137; *brevistigma* p. 138, *brunneus* p. 139 ♂♂; *risi* n. n. for *splendidus* Ris nec Selys p. 141; *urolobatus* sp. n. Fukien p. 142 figs., CHEN Quart. J. Taiwan Mus. 3.

CORDULIIDAE.

Macromia key to Malaysian spp. p. 677, to larvae p. 689; *erato* Java p. 693 (larva p. 696), *irina* Celebes p. 714 spp. n.; *gerstaeckeri* p. 702, *cydippe* (♀ p. 704) p. 706, *westwoodii* p. 708, *moorei fumata* p. 711 larvae figs., LIEFTINCK Treubia 20.—*M. caderita* sp. n. Mexico, Texas p. 10 fig., NEEDHAM Trans. Amer. ent. Soc. 76.

Procordulia smithii White (= *Somatochlora grayi* Selys) p. 1, SALMON Trans. roy. Soc. N.Z. 78.

Somatochlora grayi see *Procordulia smithii*.

LIBELLULIDAE.

Atoconeura extraordinata sp. n. Uganda p. 56 figs., FRASER Proc. R. ent. Soc. Lond. (B) 19.

Libellula correct origin of name p. 311 figs., FRASER Ent. mon. Mag. 86.

Orthemis schmidti Peru p. 79, *plaumanni* Brazil p. 80 spp. n. figs., BUCHHOLZ Bonn. zool. Beitr. 1.

Phyllothemis raymondi sp. n. Sumatra p. 643 figs., LIEFTINCK Treubia 20.

Sympetrum sanguineum nymph p. 21, *striolatum* nymphal instars p. 54 figs., GARDNER Ent. Gaz. 1.—*S. illotum*, *corruptum* see *Tarnetrum*.

Tapeinothemis gen. n. p. 638, *boharti* sp. n. Solomon Is. p. 640 figs., LIEFTINCK Treubia 20.

Tarnetrum gen. n. for *Sympetrum illotum* Hag. (type), *corruptum* Hag. p. 114 (& note), NEEDHAM & FISHER Trans. Amer. ent. Soc. 62 1936.

DERMAPTERA.

List of Nearctic Dermaptera. GURNEY Proc. ent. Soc. Wash. 52 p. 202.

Supplementary notes on Mauritian earwigs, HINCKS Ann. Mag. nat. Hist. (12) 3 pp. 353–357, 3 figs.

Dermaptera of Jászberény, Hungary, MÓCZÁR Folia ent. hung. 7 1942 p. 100.

Apterygida cavallii see *Forficula*.

Forficula cavallii Bor. from *Apterygida* p. 179; *triangulata* sp. n. Tanganyika p. 180 figs., HINCKS Ent. mon. Mag. 86.

Labia mamei sp. n. Mauritius p. 354 figs., HINCKS Ann. Mag. nat. Hist. (12) 3.

ORTHOPTERA.

Orthoptera of Poznan region, BAZYLUK Badan. fizjogr. poznań. Tow. Przyj. Nauk 1 1948 pp. 154–159.

Orthoptera of western Poland, BAZYLUK Badan. fizjogr. poznań. Tow. Przyj. Nauk 2 pp. 136–156.

Orthopteroidea of Air, Fr. Sudan, CHOPARD Mém. Inst. franç. Afr. noire no. 10 pp. 127–145, 2 figs.

Orthoptera of Jászberény, Hungary, MÓCZÁR Folia ent. hung. 7 1942 pp. 100–101.

Orthoptera of Tisza area, Hungary, NAGY Folia ent. hung. 8 1943 pp. 33-46.

Value of accessory organs of female genitalia in systematics, VOY Ann. Sci. nat. (11) 11 1949 pp. 269-345, 2 pls.

Second addition to Orthoptera of Canary Is., WILLEMSE Tijdschr. Ent. 92 pp. 248-250.

BLATTIDAE.

Blattodea of USSR, BEI-BIENKO Fn. URSS, Blatt. 343 pp. 132 figs.

Blattidae of Burma, PRINCIS Ark. Zool. (2) 1 pp. 203-222, 16 figs.

Some Blattaria in Zool. Mus. Oslo, PRINCIS Norsk ent. Tidsskr. 8 pp. 129-134, 5 figs.

Indo-Malayan and Australian Blattidae in Ent. Mus. Univ. Lund (key to genn. of Panesthiinae p. 164), PRINCIS Opusc. ent., Lund 15 pp. 161-188, 32 figs.

Key to genn. of N. American Blattaria, REHN Ent. News 61 pp. 64-67.

Acanthoblatta gen. n., *pustulata* sp. n. Belg. Congo p. 36, HANITSCH Rev. Zool. Bot. afr. 43.

Alsteinia gen. n., *nigra* sp. n. Belg. Congo p. 29, HANITSCH t.c.

Anaplecta overlaeti sp. n. Belg. Congo p. 25, HANITSCH t.c.

Arenivaga (*Psammoblatta* p. 307, *Heterogamisca* p. 326 subgenn. n.), BEI-BIENKO Fn. URSS, Blatt.

Ateloblatta camboinii ♂ figured p. 130; *natvigi* sp. n. Madagascar p. 131, PRINCIS Norsk ent. Tidsskr. 8.

Audreia malaisei sp. n. Burma p. 210 figs., PRINCIS Ark. Zool. (2) 1.

Balta vicina ♂ p. 219 figs., PRINCIS t.c.—*B. contigua* see *Megamareta*.

Blabera lindmani see *Eublaberus posticus*.

Blatta rufimarginata sp. n. Belg. Congo p. 31, HANITSCH Rev. Zool. Bot. afr. 43.—*B. latistriata* see *Jacobsonina*; *contigua* see *Megamareta propinquua*; *parvula* see *Eublaberella*; *dytiscoides* see *Diploptera punctata*.

Blattella confusa p. 215, *subcognata* p. 216 spp. n. N.E. Burma figs., PRINCIS Ark. Zool. (2) 1.—*B. kemneri* p. 175, *anderi* p. 176 E. Borneo, (*Sinablatta* subgen. n.) *brunnea* China p. 177 spp. n. figs., PRINCIS Opusc. ent., Lund 15.—*B. rubrinota* sp. n. Belg. Congo p. 28, HANITSCH Rev. Zool. Bot. afr. 43.

Bredonia gen. n., *castanea* sp. n. Belg. Congo p. 29, HANITSCH t.c.

Caeparia Stål (= *Neocaeparia* Caud.) p. 165 (note) figs., PRINCIS Opusc. ent., Lund 15.

Calolampra limbata ♂ p. 213 figs., PRINCIS Ark. Zool. (2) 1.

Ceratinoptera ghesquierei, *erythronota* spp. n. Belg. Congo p. 30, HANITSCH Rev. Zool. Bot. afr. 43.

Chorisoblatta karnyi see *Compsosilpha*.

Chorisoneura punctipennis Tenas-serium, *shanensis* S. Shan States spp. n. p. 208 figs., PRINCIS Ark. Zool. (2) 1.

Coleoblatta gen. n., *henrardi* sp. n. Belg. Congo p. 37, HANITSCH Rev. Zool. Bot. afr. 43.

Compsosilpha gen. n. for *Chorisoblatta karnyi* Han. p. 180 figs., PRINCIS Opusc. ent., Lund 15.

Cutiloidea see *Drymaplaneta*.

Diploptera punctata Eschitz. (= *Blatta dytiscoides* Serv.) p. 162; *bicolor* ♀; *erythrocephala* sp. n. E. Borneo p. 163 figs., PRINCIS Opusc. ent., Lund 15.

Drymaplaneta Tepp. (= *Cutiloidea Shaw*) p. 172 figs., PRINCIS t.c.

Dyakina antennata sp. n. E. Borneo p. 185 figs., PRINCIS t.c.

Dyscologamia pilosa Wlk. (= *Parapolyphega erectipilis* Chop.) p. 161 figs., PRINCIS t.c.

Ectobius delicatulus p. 210, *semenovi* p. 212 Kirghizia, *montanus* N.E. Uzbekistan p. 213 spp. n. figs., BEI-BIENKO Fn. URSS, Blatt.

Epilampra albina see *Rhabdo-blatta*.

Episymploce gen. n. p. 157, *paradoxura* sp. n. Szechwan p. 158 figs., BEI-BIENKO Fn. URSS, Blatt.

Eublaberus posticus Erichs. (= *Blabera lindmani* Shelf.) p. 129 figs., PRINCIS Norsk ent. Tidsskr. 8.

Eublattella gen. n. for *Blatta parvula* Wlk. p. 215 figs., PRINCIS Ark. Zool. (2) 1.

Euhanitschia gen. n. for *Phyllo-dromia diagrammatica* Haan. p. 178 figs., PRINCIS Opusc. ent., Lund 15.

Euryblattella see *Onychostylus*.

Eustegasta smaragdina sp. n. Belg. Congo p. 31, HANITSCH Rev. Zool. Bot. afr. 43.

Glomeriblatta gen. n. for *Pseudoglomeris planiuscula* Br.-W. p. 270, BEI-BIENKO Fn. URSS, Blatt.

Graptoblatta see *Onychostylus*.

Gromphadorhina characters p. 218, CHOPARD Proc. 8th int. Congr. Ent. Stockholm 1948, 1950.

Gyna bisannulata p. 34, *henrardi*, *scheitzae*, *trifoliata* p. 35 spp. n. Belg. Congo, HANITSCH Rev. Zool. Bot. afr. 43.

Hebardina concinna Haan (= *Periplaneta gracilis* Br. W.) p. 210, PRINCIS Ark. Zool. (2) 1.

Hemipanesthia ferruginipes from *Panesthia* p. 168 figs., PRINCIS Opusc. ent., Lund 15.

Hemipterica gen. n. p. 164, *miramae* sp. n. Kashmir p. 165 fig., BEI-BIENKO Fn. URSS, Blatt.

Hemithyrsocera rubrinota sp. n. Belg. Congo p. 25, HANITSCH Rev. Zool. Bot. afr. 43.—*H. piceicollis* sp. n. E. Borneo p. 183 figs., PRINCIS Opusc. ent., Lund 15.

Heterogamisca subgen. n. (type *bolivari* Adel.) see *Arenivaga*.

Hololampra enigmatica sp. n. Belg. Congo p. 27, HANITSCH Rev. Zool. Bot. afr. 43.

Ipolatta further description p. 205, PRINCIS Ark. Zool. (2) 1.

Jacobsonina latistriga Wlk. (from *Blatta*) a valid sp. and not a syn. of *Blattella humbertiana* Sauss. p. 177 figs., PRINCIS Opusc. ent., Lund 15.

Mareta hulstaerti sp. n. Belg. Congo p. 27, HANITSCH Rev. Zool. Bot. afr. 43.

Megamareta contigua Wlk. from *Balta* p. 220 figs., PRINCIS Ark. Zool. (2) 1.—*M. propinquua* Wlk. (= *Blatta contigua* p. 184), *subcontigua* ♂♂; key to Asian spp. p. 185 figs., PRINCIS Opusc. ent., Lund 15.

Miopanesthia stenotarsis ♀ p. 167 figs., PRINCIS t.c.

Mopserina gen. n. for *Thrysocera communis* Br. W. p. 218 figs., PRINCIS Ark. Zool. (2) 1.

Neocaeparia see *Caeparia*.

Onychostylus Bol. (= *Graptoblatta* Heb., *Euryblattella* Chop.); *vilis* Br. W. from *Phyllodromia* p. 181; *subnotulatus* sp. n. E. Borneo p. 182 figs., PRINCIS Opusc. ent., Lund 15.

Panesthia ferruginipes see *Hemipanesthia*.

Paropolyphaga erectipilis see *Dyscogrammia pilosa*.

Periplaneta semenovi sp. n. N.W. China p. 127 fig., BEI-BIENKO Fn. URSS, Blatt.—*P. quadrinotata* sp. n. E. Borneo p. 169 figs., PRINCIS Opusc. ent., Lund 15.—*P. gracilis* see *Hebardina concinna*.

Phyllodromia vilis see *Onychostylus*; *diagrammatica* see *Euhanitschia*.

Phyllodromica megerlei subsp. n. *asiatica* Asia Minor, N. Syria p. 233; *euxina* Black Sea, Crimea p. 239; (*Dziriblatta*) *riparia* S.E. Kazakhstan p. 254 spp. n.; (*D.*) *tartara* subsp. n. *nigrescens* Uzbekistan p. 253; (*Turanooblatta*) subgen. n. p. 249) figs., BEI-BIENKO Fn. URSS, Blatt.

Psammoblatta subgen. n. (type *livida* Brunn.) see *Arenivaga*.

Pseudoglomeris scopsi sp. n. Belg. Congo p. 37, HANITSCH Rev. Zool. Bot. afr. 43.—*P. magnifica* Shelf. (= *dubia* Han.) p. 164 figs., PRINCIS Opusc. ent., Lund 15.—*P. planiuscula* ♂ p. 205 figs., PRINCIS Ark. Zool. (2) 1.—*P. planiuscula* see *Glomeriblatta*.

Pseudophyllodromia ornata ♂ p. 180 figs., PRINCIS Opusc. ent., Lund 15.

Pycnoscelus rufus sp. n. E. Afghanistan p. 268, BEI-BIENKO Fn. URSS, Blatt.

Rhabdoblatta birmanica sp. n. Tenuasserim p. 211 figs., PRINCIS Ark. Zool. (2) 1.—*R. albina* Sauss. from *Epilamppra* p. 173; *everetti* ♂ p. 174 figs., PRINCIS Opusc. ent., Lund 15.

Scalida klossi Han. a good sp. and not syn. of *adversa* Sauss. & Zhnt. p. 174 figs., PRINCIS t.c.

Shelfordella gussakovskii S. Tadzhikistan p. 134, *tertia* Kashmir p. 136 spp. n. figs., BEI-BIENKO Fn. URSS, Blatt.

Sinablatta subgen. n. (type *brunnea* sp. n.) see *Blattella*.

Stictolampra lurida Burm. designated type p. 211, PRINCIS Ark. Zool. (2) 1.

Stylopyga albofasciata p. 32, *prinzi*, *brunneocalata* p. 33, *nkelei* p. 34 spp. n. Belg. Congo, HANITSCH Rev. Zool. Bot. afr. 43.

Symploce vrijdaghi sp. n. Belg. Congo p. 28, HANITSCH Rev. Zool. Bot. afr. 43.—*S. malaisei* sp. n. N.E. Burma p. 217 figs., PRINCIS Ark. Zool. (2) 1.—*S. zarudniana* Iran p. 150, *potanini* China p. 153 spp. n. figs., BEI-BIENKO Fn. URSS, Blatt.

Tartaroblatta karatavica sp. n. S. Kazakhstan p. 176 figs., BEI-BIENKO t.c.

Temnopteryx flavovittata sp. n. Fr. Sudan p. 129, CHOPARD Mém. Inst. franç. Afr. noire no. 10.

Thaumatoblotta [sic] gen. n., *leonthardi* sp. n. Belg. Congo p. 36, HANITSCH Rev. Zool. Bot. afr. 43.

Theganopteryx atra, gerardi spp. n. Belg. Congo p. 26, HANITSCH t.c.

Therea Billb. discussed p. 162 figs., PRINCIS Opusc. ent., Lund 15.

Thrysocera communis see *Mopsosserina*.

Tivia macracantha sp. n. Belg. Congo p. 245, CHOPARD Rev. Zool. Bot. afr. 43.—*T. inconspicua* sp. n. S.E. Iran p. 280 fig., BEI-BIENKO Fn. URSS, Blatt.

Turanoblatta subgen. n. (type *irinae* B.-B.) see *Phyllodromica*.

MANTIDAE.

African Mantids in Museo di Storia Naturale di Genova, LA

GRECA Ann. Mus. Stor. nat. Genova 64 pp. 268–284, 4 figs.

Apterameles gen. n., *rammei* sp. n. Macedonia p. 62 figs., BEIER Ent. NachrBl. öst. schweiz. Ent. 2.

Eremiaphala monodi ♂ Fr. Sudan p. 130 fig., CHOPARD Mém. Inst. franç. Afr. noire no. 10.

Galepusus decipiens sp. n. Belg. Congo p. 258 figs., BEIER Ann. naturh. Mus. Wien 57.

Oxyothespis villiersi, alata spp. n. Fr. Sudan p. 132, CHOPARD Mém. Inst. franç. Afr. noire no. 10.

Tarachodes vitreus sp. n. Italian Somaliland p. 273 figs., LA GRECA Ann. Mus. Stor. nat. Genova 64.

Telomantis robusta sp. n. Belg. Congo p. 261, BEIER Ann. naturh. Mus. Wien 57.

Theopompa servillei ootheca, first larval instar p. 23 figs., LIEFTINCK Idea 8.

GRYLACRIDAE.

Revision of New Zealand Anostostomatinae, SALMON Domin. Mus. Rec. Ent. 1 pp. 121–177, 66 figs.

Deinacrida key to N.Z. spp.; *tibiospina* p. 124, *carinata* p. 128, *sonitospina* p. 130, *fallai* p. 138 spp. n. New Zealand figs., SALMON Domin. Mus. Rec. Ent. 1.

Dolichopoda curnensis sp. n. Corsica p. 13; key p. 14 figs., CHOPARD Bull. Soc. ent. Fr. 55.

Hemiandrus key to N.Z. spp. p. 170; *anomalus* p. 172, *monstrosus* p. 175 spp. n. New Zealand; *similis* Ander (= *bilobatus* Ander) p. 172 figs., SALMON Domin. Mus. Rec. Ent. 1.

Hemideina key to N.Z. spp. p. 140; *alterna* p. 141, *tibiata* p. 144, *crassicruris* p. 139, *brevaculea* p. 150 spp. n. New Zealand; *figurata* Wlk. (= *armiger* Colen., *nitens* Colen., *armiger* Hutt., *femorata* Hutt., *ricta* Hutt.) a subsp. of *thoracica* p. 158 figs., SALMON t.c.

Henicus whellani sp. n. S. Rhodesia p. 449, CHOPARD Ann. Mag. nat. Hist. (12) 3.

Nasidius karnyi sp. n. S. Rhodesia p. 447, CHOPARD t.c.

Onosandrus maculifrons (*pallitarsis*) see *Zealandosandrus*.

Zealandosandrus gen. n. p. 159 for *Onosandrus maculifrons* Wlk. (type) (= *pallitarsis* Hutton) key to N.Z. spp.; *subantarcticus* p. 161, *gracilis* p. 164, *fiordensis* p. 167 spp. n. New Zealand figs., SALMON Domin. Mus. Rec. Ent. 1.

GRYLLIDAE.

Gryllus campestris, *bimaculatus*, *bermudensis* eggs pp. 76–100 figs., DARBOIS Bull. biol. Fr.-Belg. 84.

Homoeogryllus cavicola sp. n. Belg. Congo p. 246 figs., CHOPARD Rev. Zool. Bot. afr. 43.

Phaeophilacris bredoii copulatory organ p. 250 fig., CHOPARD t.c.

Sciobia (Platyblemmus) longicauda sp. n. Morocco p. 1 fig., GAILLAT-AIROLDI Boll. Mus. zool. Anat. comp. Genova 19 1939 no. 114.

TETTIGONIIDAE.

Tettigoniidae from Azerbaijan, MAKOUI Ent. Phytopath. appl., Teheran no. 10 pp. 8–9.

Moroccan Tettigoniids, MORALES AGACINO Eos 26 pp. 157–196, 17 figs.

Studies in Dysoniae, I, REHN Trans. Amer. ent. Soc. 75 pp. 271–320, 3 pls. 21 figs.

Tettigoniidae of Cyprus, UVAROV Comment. biol., Helsingfors 10 1949 no. 10 pp. 2–3.

Antaxius pauliani ♂ p. 172 figs., MORALES AGACINO Eos 26.

Anterastes uludaghensis sp. n. Turkey p. 157 figs., KARABAG Proc. R. ent. Soc. London (B) 19.

Apolinaria gen. n. for *Machima hygracantha* Karsch p. 308 figs., REHN Trans. Amer. ent. Soc. 75.

Euconocercus gen. n., *iris* (type) Azerbaijan p. 1089, *caucasicus* Daghestan, N. Caucasus, Armenia p. 1090 spp. n. fig., BEI-BIENKO C.R. Acad. Sci. URSS (N.S.) 73.

Gnathoclita p. 239, *vorax* p. 244 re-descriptions figs., WILLEMS Arthropoda, Buenos Aires 1.

Hemictenodecticus lozanoi sp. n. Sp. Morocco p. 174 figs., MORALES AGACINO Eos 26.

Hyphinoemos svenhedini sp. n. Tibet p. 76 figs., RAMME Ent. NachrBl. öst. schweiz. Ent. 2.

Leptophyes trivittata sp. n. Azerbaijan, N. Iran, Armenia p. 1089, BEI-BIENKO C.R. Acad. Sci. URSS (N.S.) 73.

Lichenochrus costalimai sp. n. Brazil p. 558 figs., DE TOLEDO PIZA Rev. Ent., Rio de J. 21.

Machima key to spp.; *scalprum* p. 301, *paranensis* p. 306 spp. n. Brazil figs., REHN Trans. Amer. ent. Soc. 75.—*M. hygracantha* see *Apolinaria*.

Machimoides gen. n. p. 284, key to spp.; *vivasi* (type) Venezuela p. 286, *minarum* Brazil p. 290, *yuracare* Bolivia p. 293 spp. n. figs., REHN Trans. Amer. ent. Soc. 75.

Montana ankarensis, *uvarovi* p. 159, *bifoveolata* p. 160 spp. n. Turkey figs., KARABAG Proc. R. ent. Soc. London (B) 19.

Odontura maroccana Bol. (= *liouvillei* subsp. *teknicus* Mor. Ag.) p. 161; *moghrebica* sp. n. Sp. Morocco p. 163 figs., MORALES AGACINO Eos 26.

Ommatoptera montana sp. n. Brazil p. 555 figs., DE TOLEDO PIZA Rev. Ent., Rio de J. 21.

Orpacophora ornata sp. n. Brazil p. 559 figs., DE TOLEDO PIZA Rev. Ent., Rio de J. 21.

Panoploscelis characters p. 111; *scudderii* B. Guiana, Brazil p. 112, *angusticauda* Brazil p. 113, *specularis* Ecuador, Brazil p. 114 spp. n. figs., BEIER Proc. 8th int. Congr. Ent. Stockholm 1948, 1950.

Parableta affinis sp. n. Brazil p. 158, DE TOLEDO PIZA Rev. Ent., Rio de J. 21.

Parnassiana vicheti sp. n. France p. 8 fig., DELMAS & RAMBIER Bull. Soc. ent. Fr. 55.

Peupestes lutescens sp. n. Brazil p. 157, DE TOLEDO PIZA Rev. Ent., Rio de J. 21.

Pholidoptera kossugi sp. n. Turkey p. 158 figs., KARABAG Proc. R. ent. Soc. London (B) 19.

Platycleis denticulata variation in Scandinavia pp. 31–54 (with *ff. n. scandica, oelandica, gotlandica* Sweden p. 43) figs., ANDER Föhr. K. fysiogr. Sällsk. Lund **19** no. 3.

Poecilimon birandi, glandifer p. 150, *excisus, turcicus* p. 152, *cervus* p. 153 spp. **n.** Turkey figs., KARABAG Proc. R. ent. Soc. Lond. (B) **19**.

Porphyromma rhombifolia p. 556, *acutifolia* p. 557 spp. **n.** localities unknown figs., DE TOLEDO PIZA Rev. Ent., Rio de J. **21**.

Quiva key to spp. p. 276; *pulchella* sp. **n.** Peru p. 277; *abacata* further description p. 282 figs., REHN Trans. Amer. ent. Soc. **75**.

Scudderia piracicabensis sp. **n.** Brazil p. 159, DE TOLEDO PIZA Rev. Ent., Rio de J. **21**.

Steropleurus pardoi p. 183, *keta-mensis* p. 185 spp. **n.** Sp. Morocco figs., MORALES AGACINO Eos **26**.

Tanusia obtusifolia sp. **n.** Brazil p. 555 figs., DE TOLEDO PIZA Rev. Ent., Rio de J. **21**.

Tettigonia lozanoi ♂ p. 168 figs., MORALES AGACINO Eos **26**.

Topana rubiginosa ♀ p. 160, DE TOLEDO PIZA Rev. Ent., Rio de J. **21**.

Tylopis villiersi sp. **n.** Fr. Sudan p. 133 figs., CHOPARD Mém. Inst. franç. Afr. noire no. 10.

Uromenus poncyi p. 188, *chamero-pis* p. 190 ♀ figs., MORALES AGACINO Eos **26**.

Yungasacris gen. **n.** p. 311, *grata* (type) Bolivia p. 313, *peruviana* Peru p. 318 spp. **n.** figs., REHN Trans. Amer. ent. Soc. **75**.

TETRIGIDAE.

Paratettix asbenensis sp. **n.** Fr. Sudan p. 136, CHOPARD Mém. Inst. franç. Afr. noire no. 10.

Tetrix subulata, ceperoi distinguishing characters p. 189 figs., BROWN J. Soc. Brit. Ent. **3**.

EUMASTACIDAE.

Gomphomastax gussakovskii sp. **n.** Tadzhikistan p. 792 figs., MISHCHENKO C.R. Acad. Sci. URSS (N.S.) **71**.

ACRIDIDAE.

Acridids of Transcarpathian Ukraine, CHETUIRKINA C.R. Acad. Sci. URSS (N.S.) **70** pp. 729–732.

Acridids of Syria and neighbouring countries, DIRSH Eos **26** pp. 55–71, 6 figs. 1 map.

Some S. American Acridids, LIEBERMANN Rev. brasili. Biol. **10** pp. 133–139.

Acrididae from Azerbaijan, MAKOUR Ent. Phytopath. appl., Teheran no. 10 pp. 3–8.

Acridids of Lebanon, MORALES AGACINO Eos **26** pp. 19–36, 10 figs.

Acrididae of Cyprus, UVAROV Comment. biol., Helsingfors **10** 1949 no. 10 pp. 3–6.

Key to and descriptions of egg pods of British Acridids, WALOFF Proc. R. ent. Soc. Lond. (A) **25** pp. 115–126, 10 figs.

Acrida pellucida palaestina ♀ p. 21, MORALES AGACINO Eos **26**.

Acrotylus longipes subsp. **n.** *subfasciatus* Baluchistan p. 498, BEI-BIENKO C.R. Acad. Sci. URSS (N.S.) **60** 1948.

Anacridium aegyptium subsp. **n.** *rubrispinum* Baluchistan p. 499, BEI-BIENKO t.c.

Bibulus see *Thisoicetrus*.

Bienkoia gen. **n.** for *Conophyma fedtschenkoi* Zub. p. 791, MISHCHENKO C.R. Acad. Sci. URSS (N.S.) **71**.

Brachaspis villosa sp. **n.** New Zealand p. 69 figs., SALMON Trans. roy. Soc. N.Z. **78**.

Buinacris gen. **n.** p. 251, *forcipata* (type) p. 253, *carpentieri* p. 255 spp. **n.** Solomon Is. figs., WILLEMS Tijdschr. Ent. **92**.

Catantops joycei sp. **n.** Sudan p. 318 figs., DIRSH Bull. ent. Res. **41**.

Chorthippus parallelus f. **n.** *ochracea* Italy p. 61, GALVAGNI Boll. Soc. ent. ital. **80**.—*C. biguttulus* subsp. **n.** *meridionalis* Russian Central Asia p. 790 fig., MISHCHENKO C.R. Acad. Sci. URSS (N.S.) **71**.

Conophyma jacobsoni subsp. **n.** *vastum, obnoxium*; *splendidum* sp. **n.**

Russian Central Asia p. 791 figs., MISHCHENKO t.c.—*C. kashmircum, indicum* Kashmir, *egregium* Turkestan, *armatum* p. 213, *dumale* Hissar, *nigrescens*, *tumidum*, *argutum* p. 214, *validum*, *geminum*, *darvazicum*, *turcomanicum*, *excellens*, *lobulatum* spp. n.; *uvarovi* subsp. n. *vicinum* p. 215 Centr. Asia figs., MISHCHENKO op. cit. (N.S.) 72.—*C. fedtschenkoi* see *Bienko*; *kittaryi* see *Tarbinskia*.

Dericorys guichardi sp. n. Br. Somaliland p. 18 figs., DIRSH Proc. R. ent. Soc. Lond. (B) 19.

Diponthus bilineatus ♀ p. 135, LIEBERMANN Rev. brasili. Biol. 10.

Duroniella kostylevi sp. n. Baluchistan p. 497 figs., BEI-BIENKO C.R. Acad. Sci. URSS (N.S.) 60 1948.

Egnatiooides pasquieri sp. n. Lebanon p. 28 figs., MORALES AGACINO Eos 26.—*E. pasquieri* ♂ p. 62 figs., DIRSH Eos 26.

Eyprepocnemis noxius sp. n. Sudan, Tanganyika, Nigeria p. 317 figs., DIRSH Bull. ent. Res. 41.

Locusta migratoria migratorioides table for determination of sexes of nymphs p. 138 figs., DIRSH Proc. R. ent. Soc. Lond. (B) 19.

Notostaurus cephalotes ♂ p. 24 figs., MORALES AGACINO Eos 26.

Ochrilidia pachypes n. n. for brevipes Chop. nec Stål p. 138, CHOPARD Mém. Inst. franç. Afr. noire (B) 24.

Ocneropsis syriacus Bris., *verrucosus* Brunn., *simulans* Bol. from *Prionosthenus* p. 65, DIRSH Eos 26.

Oedaleus villiersi sp. n. Fr. Sudan p. 139, CHOPARD Mém. Inst. franç. Afr. noire no. 10.

Oedipoda coerulescens f. n. *pretiosa* Italy p. 63, GALVAGNI Boll. Soc. ent. Ital. 80.

Paraconophyma kashmircum sp. n. Kashmir p. 213, MISHCHENKO C.R. Acad. Sci. URSS (N.S.) 72.

Prionosthenus lebanicus sp. n. Lebanon; scope of gen. p. 65, DIRSH Eos 26.—*P. syriacus*, *verrucosus*, *simulans* see *Ocneropsis*.

Sinipta revision pp. 3–16; *hectorisperonii* sp. n. Argentina p. 7

figs., LIEBERMANN [Publ. Inst. Sanid. veg.] Minist. Agric. argent. (A) 6 no. 52.

Sphingonotus airensis sp. n. Fr. Sudan p. 141, CHOPARD Mém. Inst. franç. Afr. noire no. 10.—*S. paradoxus* sp. n. Baluchistan p. 498 fig., BEI-BIENKO C.R. Acad. Sci. URSS (N.S.) 60 1948.

Tarbinskia gen. n. for *Conophyma kittaryi* Tarb. (type); *cognata* sp. n. N. Afghanistan p. 791 figs., MISHCHENKO op. cit. (N.S.) 71.

Thisoicetrus Brunn. (= *Bibulus* I. Bol.) p. 133; *caerulescens* Stål (= *desertus* Uv.) p. 134 figs., POPOV Proc. R. ent. Soc. Lond. (B) 19.

Tropidauchen viridis, *alexandrovi* spp. n. Iran p. 1091 figs., BEI-BIENKO C.R. Acad. Sci. URSS (N.S.) 73.

TRIDACTYLIDAE.

Tridactylus ceylonicus sp. n. Ceylon p. 47 figs., FERNANDO Ceylon J. Sci. (B Zool.) 24.—*T. spp.* from Parc nat. Albert, Belg. Congo p. 3, CHOPARD Explor. Parc nat. Albert, Miss. de Witte fasc. 70.

PHASMIDAE.

Moroccan Phasmids, MORALES AGACINO Eos 26 pp. 157–196, 17 figs.

COLEMBOLA.

Collembola of cruise of "Bougainville" to French Antarctic Is., DENIS Mém. Mus. Hist. nat., Paris (N.S.) 20 1947 pp. 31–51, 9 figs.

List of Collembola of E. Alps, FRANZ Zool. Jb. (Syst.) 77 1945 pp. 81–162.

Preliminary list of Collembola of Utah, WRAY, KNOWLTON & MA Bull. Brooklyn ent. Soc. 45 pp. 60–64.

Acherontiella variabilis sp. n. p. 49 (with f. n. *lineata* p. 50) France; key to allied genn. p. 55 figs., DELAMARE-DEBOUTTEVILLE Publ. Mus. Hist. nat., Paris no. 11 1948.—*A. sabina*, *epigea* see *Acherontiellina*.

Acherontiellina gen. n. for *Acherontiella sabina* Bon., *epigea* Bon. p. 56 figs., DELAMARE-DEBOUTTEVILLE Publ. Mus. Hist. nat., Paris no. 11 1948.

Achorutes promatros sp. n. U.S.A. p. 94 figs., WRAY Bull. Brooklyn ent. Soc. 45.—*A. sinister* see *Neanura phlegraea*.

Anurida granaria redescription p. 3; *remyi* p. 5, *banyulensis* p. 7 spp. n. France figs., DENIS Bull. Sci. Bourgogne Suppl. no. 1.

Beckerellodes libycus redescription p. 1 figs., DENIS op. cit. no. 5.

Ceratrimeria mandibulata Kenya p. 157, *bicolor* p. 163, *africana* p. 166 (with var. n. *nigra*), *maculata* p. 170 *Tanganyika* spp. n.; *gigas* redescription p. 169; key to African spp. p. 173 figs., DELAMARE-DEBOUTTEVILLE Mém. Mus. Hist. nat., Paris (N.S.) 21 1946.

Cyphoderus humilis var. n. *guanobia* Ivory Coast p. 66 fig., PAULIAN & DELAMARE-DEBOUTTEVILLE Publ. Mus. Hist. nat., Paris no. 10 1948.

Cyphodropsis lamottei sp. n. Fr. Guinea p. 44 figs., DELAMARE-DEBOUTTEVILLE Bull. Soc. zool. Fr. 75.

Deuterosminthurus neopandus sp. n. Utah p. 95 figs., WRAY Bull. Brooklyn ent. Soc. 45.

Dicyrtomina synonymy discussed p. 416, GISIN Mitt. schweiz. ent. Ges. 23.

Folsomia highlandia sp. n. N. Carolina p. 95 figs., WRAY Psyche 57.

Friesea key to Swiss spp. of *mirabilis* group p. 411, GISIN Mitt. schweiz. ent. Ges. 23.—*F. (Polyacanthella) jeanneli* p. 34, (*P.*) *multispinosa* p. 37 spp. n. Kerguelen Is. figs., DENIS Mém. Mus. Hist. nat., Paris (N.S.) 20 1947.

Heteromurus hexophthalmus sp. n. France p. 48 fig., DENIS Bull. sci. Bourgogne 11 1948.

Isotoma agrelli sp. n. p. 43 (with var. n. *pigmentata* p. 44) France figs., DELAMARE - DEBOUTTEVILLE Rev. franç. Ent. 17.

Isotomina pontica characters p. 179 figs., DELAMARE-DEBOUTTEVILLE Bull. Mus. Hist. nat. Marseille 8 1948.

Katianna kerguelensis sp. n. Kerguelen Is. p. 48 figs., DENIS Mém. Mus. Hist. nat., Paris (N.S.) 20 1947,

Lepidocyrtus key to allied genn. p. 120, DELAMARE-DEBOUTTEVILLE Publ. Mus. Hist. nat., Paris no. 12 1949.

Neanura (Lathriopyga) phlegraea Car. (= *Achorutes sinister* Den.) p. 412; (*L.*) *giselae* sp. n. Switzerland p. 414 figs., GISIN Mitt. schweiz. ent. Ges. 23.

Odontella stachi sp. n. France p. 1 figs., DENIS Bull. Sci. Bourgogne Suppl. no. 1.

Onychiurus spipolae sp. n. Italy p. 519 figs., BIANCHI, CAFORIACCO, MASSERA & VALLE Comment. pontif. Acad. Sci. 13 1949.—*O. wilchi* sp. n. Illinois p. 98 figs., WRAY Psyche 57.—*O. magninus*, mai spp. n. Utah p. 91 figs., WRAY Bull. Brooklyn ent. Soc. 45.—*O. ortus* further description p. 45, DENIS Bull. sci. Bourgogne 11 1948.

Orchesella immature stages of Swiss spp. pp. 394-414; *jurassica* p. 402, *arcuata* p. 413 spp. n. Switzerland figs., LINDENMANN Rev. suisse Zool. 57.

Oudemansia dubia sp. n. Madagascar p. 31 figs., DENIS Mém. Mus. Hist. nat., Paris (N.S.) 20 1947.

Paronella lamottei sp. n. Fr. Guinea p. 43 figs., DELAMARE-DEBOUTTEVILLE Bull. Soc. zool. Fr. 75.

Podura L. 1758 previous type selections rejected and *aquatica* L. designated type, Bull. zool. Nomen. 4 p. 506.

Proisotoma topsenti sp. n. France p. 45 fig., DENIS Bull. sci. Bourgogne 11 1948.—*P. subarctica* n. n. for *pseudominuta* Agrell nec Schött p. 415, GISIN Mitt. schweiz. ent. Ges. 23.

Pseudachorutes alluaudi sp. n. Kenya p. 155 figs., DELAMARE-DEBOUTTEVILLE Mém. Mus. Hist. nat., Paris (N.S.) 21 1946.

Pseudosinella ksenemani sp. n. France p. 49 fig., DENIS Bull. sci. Bourgogne 11 1948.—*P. vandeli* subsp. n. *alpina* p. 94; *conciii* sp. n. p. 95 Italy, GISIN Boll. Soc. ent. ital. 80.

Sinella curviseta characters p. 46, key to European spp. p. 47 figs.,

DELAMARE-DEBOUTTEVILLE Rev.
franç. Ent. 17.

Sminthurides (Sphaeridia) pumilis
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p. 7) further description p. 2 figs.,
DENIS Bull. sci. Bourgogne Suppl.
no. 4.

Sminthurinus krausbaueri redescription
p. 8, generic position discussed p. 10 figs., DENIS t.c.

Subisotoma petiti sp. n. France p.
177 figs., DELAMARE-DEBOUTTEVILLE
Bull. Mus. Hist. nat. Marseille 8 1948.

Tomoceros Nicolet 1842 previous
type selections rejected and *minor*
Lubb. designated type, placed on
Official List, Bull. zool. Nomen. 4
p. 506.

Tritomurus henroti sp. n. Virginia
p. 117 figs., DELAMARE-DEBOUTTE-
VILLE Publ. Mus. Hist. nat., Paris
no. 12 1949.

Troglosinella gen. n. p. 118, *hirsuta*
(type) p. 121, *spinosa* p. 122 spp. n.
U.S.A. figs., DELAMARE-DEBOUTTE-
VILLE Publ. Mus. Hist. nat., Paris
no. 12 1949.

*Tullbergia (Mesaphorura) knowl-
toni* sp. n. Utah p. 97 figs., WRAY
Psyche 57.—*T. bipartita* redescription
p. 11; *boernerii* p. 13, *bagnalli*,
affinis status discussed p. 14 figs.,
DENIS Bull. sci. Bourgogne Suppl.
no. 4.

Willemia inermis Börn. (= *scandi-
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GISIN Mitt. schweiz. ent. Ges. 23.—
W. vashtii sp. n. Utah p. 92 figs.,
WRAY Bull. Brooklyn ent. Soc. 45.

Xenyllodes armatus characters of
N. Carolina form p. 99 figs., WRAY
Psyche 57.

THYSANURA.

Campodeids of Var and Alpes-
Maritimes, CONDÉ Bull. Soc. linn.
Lyon 19 pp. 128-132, 9 figs.

Anisocampa lateralis sp. n. S.
Africa p. 807 figs., CONDÉ Proc. zool.
Soc. Lond. 119.

Campodea (Monocampa) goursati
sp. n. France p. 129 figs., CONDÉ Bull.
Soc. linn. Lyon 19.—*C. (C.) tuzetae*

sp. n. France p. 36 figs., CONDÉ Publ.
Mus. Hist. nat., Paris no. 10 1948.

Haplocampa minutella see *Oreocampa*;
africana see *Silvestricampa*.

Japyx remyi sp. n. Algeria p. 73
figs., CONDÉ & PAGÉS Bull. Soc. ent.
Fr. 55.

Machillellus albuquerquei p. 606,
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Brazil figs., WYGODZINSKY Acta zool.
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Machilinus birabéni ♀ p. 596; *mun-
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Machilis helvetica Switzerland p.
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Machilooides birabéni sp. n. Argen-
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Acta zool. lilloana 7.

Metriocampa (Notocampa) afra sp.
n. Natal p. 813 figs., CONDÉ Proc.
zool. Soc. Lond. 119.

Oreocampa gen. n. for *Haplo-
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Natal figs., CONDÉ t.c.—*O. minutella*
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CONDÉ Rev. franç. Ent. 17.

Plusiocampa (Stygiocampa) remyi
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Paris no. 8 1947.—*P. bourgoini* p. 39,
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p. 43 figs., CONDÉ op. cit. no. 10 1948.
—*P. henroti* p. 127, *valentinei* p. 130,
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Appalachians figs., CONDÉ op. cit.
no. 12 1949.—*P. espanoli* p. 569,
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CONDÉ Bull. Mus. Hist. nat., Paris
(2) 21.—*P. grandii* subsp. n. *caprai*
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no. 3.

Silvestricampa gen. n. for *Haplo-
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Proc. zool. Soc. Lond. 119.

Sympylurinus eburneus sp. n.
Ivory Coast p. 63 figs., PAULIAN &
DELAMARE-DEBOUTTEVILLE Publ.
Mus. Hist. nat., Paris no. 10 1948.

Troglocampa pouadensis further
description p. 51, DENIS Bull. sci.
Bourgogne 11 1948.

PROTURA.

Protura of Portugal, DA CUNHA
Mem. Estud. Mus. zool. Univ.
Coimbra no. 200, 14 pp. 2 pls. 7 figs.

Catalogue of Protura of World,
ROSAS COSTA Arthropoda, Buenos
Aires 1 pp. 327-356.

Acerentulus cunhai sp. n. Pays
Basque, Portugal p. 3 figs., CONDÉ
Mem. Estud. Mus. zool. Coimbra no.
198.—*A. caldarius* further descrip-
tion p. 5; *ladeiroi* sp. n. Portugal
p. 6 figs., DA CUNHA Mem. Estud.
Mus. zool. Univ. Coimbra no. 200.—
A. danicus pre-larva pp. 577-583
figs., TUXEN Proc. 8th int. Congr.
Ent. Stockholm 1948, 1950.

Bolivaridinae subfam. n. p. 337
(note), ROSAS COSTA Arthropoda,
Buenos Aires 1.

Eosentomon condéi sp. n. Portugal
p. 3 fig., DA CUNHA Mem. Estud.
Mus. zool. Univ. Coimbra no. 200.

FOSSILS.

Origin and evolution of insects,
AUBERT Bull. Soc. vaud. Sci. nat. 64
no. 277 pp. 461-477, 22 figs.

Fossil nests in loess in Ecuador,
BRUET Rev. franç. Ent. 17 pp. 280-
283.

Formation of Quercy fossils, HAND-
SCHIN Proc. 8th int. Congr. Ent.
Stockholm 1948, 1950 pp. 137-140,
2 figs.

Origin and evolution of insects,
JEANNEL Proc. 8th int. Congr. Ent.
Stockholm 1948, 1950 pp. 80-86.

Liassic insects from Shurab and
Kisyl-Kiya, Ferghana, MARTUINOV
Trav. Inst. paléont. Acad. Sci. URSS
7 1937 pp. 1-232, 7 pls. 102 figs.

Treatise on Palaeontology, 2.
Invertebrates—2°. Arthropods and
Molluscs, MÉLENDEZ pp. 171-187.

When do insects become fossil?
PIERCE Bull. S. Calif. Acad. Sci. 49
pp. 105-107.

A new Tertiary locality in Montana
with a preliminary list of families,
ZUIDEMA Pap. Michigan Acad. Sci.
Arts Lett. 34 pt. 2 Zool. pp. 119-123,
4 pls.

Coleoptera.

Fossil Paussids, DARLINGTON
Trans. Amer. ent. Soc. 76 pp. 85-88.

Donacia (D.) *draycoti* p. 7, (D.)
cordovae, (D.) *lynii* p. 8 spp. n.
interglacial lignite, Vancouver; com-
parative measurements of fossil spp.
p. 9 figs., PIERCE Bull. S. Calif. Acad.
Sci. 49.

Notiophilus sylvaticus, *nemoralis*,
semiopacus characters p. 4; *vancouveri* sp. n.
interglacial lignite, N. Vancouver p. 5 figs., PIERCE t.c.

Hymenoptera.

Liadoxylea gen. n., *praecox* sp. n.
Liassic, Ferghana pp. 41, 142 figs.,
MARTUINOV Trav. Inst. paléont.
Acad. Sci. URSS 7 1937.

Neuroterus sp. gall (on *Quercus*)
Tertiary, Austria p. 789, BERGER
S.B. öst. Akad. Wiss. Abt. I 158 1949.

Paratrichoptera.

Choristopsychidae fam. n. pp. 26,
135, MARTUINOV Trav. Inst. paléont.
Acad. Sci. URSS 7 1937.

Choristopsyche gen. n., *tenuinervis*
sp. n. Liassic, Ferghana pp. 26, 135
figs., MARTUINOV Trav. Inst. paléont.
Acad. Sci. URSS 7 1937.

Ferghanopsyche gen. n., *rotundata*
sp. n. Liassic, Ferghana pp. 29, 136
figs., MARTUINOV t.c.

Ptychopteropsis gen. n., *mirabilis*
sp. n. Liassic, Ferghana pp. 35, 139
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Sogdopsycy gen. n. pp. 32, 138,
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figs., MARTUINOV t.c.

Turanopsyche gen. n., *venosa* sp. n.
Liassic, Ferghana pp. 37, 140 figs.,
MARTUINOV t.c.

Neuroptera.

Kirgisella see *Kirgisellodes*.

Kirgisellodes n. n. for *Kirgisella*
Mart. preocc. pp. 39, 141 (note),
MARTUINOV Trav. Inst. paléont.
Acad. Sci. URSS 7 1937.

Mesopolystoechus gen. n. pp. 38,
140, *apicalis* sp. n. Liassic, Ferghana
pp. 39, 141 figs., MARTUINOV t.c.

Mecoptera.

Liassopanorpa gen. n., *crassinervis*
sp. n. Liassic, Ferghana pp. 24, 135
figs., MARTUINOV Trav. Inst. paléont.
Acad. Sci. URSS 7 1937.

Mesopanorpa umbrata pp. 19, 133,
unicolor pp. 20, 133, spp. n. Liassic,
Ferghana figs., MARTUINOV t.c.

Neorthophlebia robusta sp. n. Lias-
sic, Ferghana pp. 21, 134 figs.,
MARTUINOV t.c.

Orthophlebia angustata pp. 13, 130,
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pp. 17, 132, *aqualis* pp. 18, 133 spp. n.
Liassic, Ferghana figs., MARTUINOV
t.c.

Diptera.

Leaf-mine of Agromyzid sp. Ter-
tiary, Bosnia p. 790 figs., BERGER
S.B. öst. Akad. Wiss. Abt. I 158 1949.

Hemiptera.

Cantacader avitus sp. n. Baltic
amber p. 161 figs., DRAKE Arthro-
poda, Buenos Aires 1.

Cicadellopsis gen. n., *incerta* sp. n.
Liassic, Ferghana pp. 107, 169 figs.,
MARTUINOV Trav. Inst. paléont.
Acad. Sci. URSS 7 1937.

Diphtheropsis gen. n., *incerta* sp. n.
Liassic, Ferghana pp. 110, 170 figs.,
MARTUINOV t.c.

Eofulgoridium gen. n., *kisyl-kiense*
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MARTUINOV t.c.

Fulgoropsis gen. n., *dubiosa* sp. n.
Liassic, Ferghana pp. 97, 165 figs.,
MARTUINOV t.c.

Kisylia gen. n., *psylooides* sp. n.
Liassic, Ferghana pp. 109, 170 figs.,
MARTUINOV t.c.

Mesaleuropsis gen. n., *venosa* sp. n.
Liassic, Ferghana pp. 108, 169 figs.,
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t.c.

Phatnoma baltica sp. n. Baltic
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poda, B. Aires 1.

Proceropina gen. n. pp. 99, 165,
asiatica sp. n. Liassic, Ferghana pp.
99, 166 figs., MARTUINOV Trav. Inst.
paléont. Acad. Sci. URSS 7 1937.

Isoptera.

Fossil termites of the U.S.A. and
their living relatives, SNYDER Proc.
ent. Soc. Wash. 52 pp. 190–193.

Meganisoptera.

Liadotyptus gen. n. pp. 110, 171,
relictus sp. n. Liassic, Ferghana pp.
111, 171 figs., MARTUINOV Trav.
Inst. paléont. Acad. Sci. URSS 7
1937.

Plecoptera.

Mesonemura turanica sp. n. Liassic,
Ferghana pp. 85, 169 figs., MARTUINOV
Trav. Inst. paléont. Acad. Sci. URSS 7
1937.

Mesotaeniopteryx gen. n., *elongata*
(type) pp. 81, 158, *splendida* pp. 82,
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Shurabia gen. n., *ovata* (type) pp.
77, 156, *angustata* pp. 78, 156 spp. n.
Liassic, Ferghana figs., MARTUINOV
Trav. Inst. paléont. Acad. Sci.
URSS 7 1937.

Ephemeroptera.

Nymph of fossil Ephemeroptera, limestone, Ceará, Brazil p. 419 fig., DA COSTA LIMA An. Acad. bras. Cienc. 22.

Odonata.

Sogdothemis gen. n., *modesta* sp. n. Liassic, Ferghana pp. 116, 174 figs., MARTUINOV Trav. Inst. paléont. Acad. Sci. URSS 7 1937.

Protodonatta.

Meganeura spp. morphology p. 553, CARPENTIER F. & M. C.R. 13e Congr. int. Zool. Paris 1948, 1949.

Orthoptera.

Aboilus cellulosus sp. n. Liassic, Ferghana pp. 58, 148 figs., MARTUINOV Trav. Inst. paléont. Acad. Sci. URSS 7 1937.

Archaboilus gen. n., *kisyl-kiensis* (type) pp. 51, 146, *shurabicus* pp. 53, 147, *sinuatus* pp. 54, 147 spp. n. Liassic, Ferghana figs., MARTUINOV t.c.

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Eneriblatta elegantissima f. n. *septentrionalis* p. 122; *gallica* sp. n. p. 126 Carboniferous, France figs., LAURENTIAUX Bol. Soc. geol. Portugal 8 1949.

Euryblattula gen. n., *sparsa* sp. n. Liassic, Ferghana pp. 205, 227 figs., MARTUINOV Trav. Inst. paléont. Acad. Sci. URSS 7 1937.

Isfaroptera gen. n. pp. 61, 150, *grylliformis* sp. n. Liassic, Ferghana pp. 62, 150 figs., MARTUINOV t.c.

Isfaropteridae fam. n. pp. 61, 149, MARTUINOV t.c.

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Mesoblattina multivenosa sp. n. Liassic, Ferghana pp. 198, 225 figs., MARTUINOV t.c.

Mesoblattula shurabica pp. 203, 226, *kiensis* pp. 204, 227 spp. n. Liassic, Ferghana figs., MARTUINOV t.c.

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Samaroblattula gen. n. pp. 199, 225, *subacuta* (type) pp. 200, 225, *furcata* pp. 202, 226 spp. n. Liassic, Ferghana figs., MARTUINOV t.c.

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Taublatta gen. n. pp. 191, 222, *curvata* (type) pp. 191, 223, *kisyl-kiensis* pp. 193, 223, *dubiosa* pp. 194, 223 spp. n. Liassic, Ferghana figs., MARTUINOV t.c.

Protorhoptera.

Protorhoptera of lower Permian, Kansas, Liomopteridae and its relatives, CARPENTER Proc. Amer. Acad. Arts Sci. 78 pp. 185-219, 3 pls. 11 figs.

Blattinopsis in Carboniferous, Bas-Douro, Portugal pp. 165-166 figs., LAURENTIAUX & TEIXEIRA Bol. Soc. geol. Portugal 7 1948.

Chelopteridae fam. n. p. 198, CARPENTER Proc. Amer. Acad. Arts Sci. 78.

Chelopterum gen. n., *peregrinum* sp. n. lower Permian, Kansas p. 199 figs., CARPENTER t.c.

Demopteridae fam. n. p. 203, CARPENTER t.c.

Demopterum gen. n., *gracile* sp. n. lower Permian, Kansas p. 203 figs., CARPENTER t.c.

Lepium see *Phenopterum*; *reticulatum*, *sellardsi* see *P. elongatum*.

Liomopterum ornatum Sell. (=*extensem* Sell.) p. 189; *sellardsi* sp. n. lower Permian, Kansas p. 194 figs., CARPENTER Proc. Amer. Acad. Arts Sci. 78.

Phenopteridae n. n. for Lepiidae Sellards p. 204, CARPENTER t.c.

Phenopterum n. n. for *Lepium* Sell. nec End. p. 205; *elongatum* Sell. (=*L. reticulatum* Sell., *L. sellardsi* Handl.) p. 206, CARPENTER t.c.

Protembia permiana Tilly. (= *Telactinopteryx striatipennis* Tilly.) p. 209, CARPENTER t.c.

Semopterum gen. n., *venosum* sp. n. lower Permian, Kansas p. 197 figs., CARPENTER t.c.

Stereopteridae fam. n. p. 201, CARPENTER t.c.

Stereopterum gen. n., *rotundum* sp. n. lower Permian, Kansas p. 202 figs., CARPENTER t.c.

Tapopterum gen. n., *celsum* sp. n. lower Permian, Kansas p. 195 figs., CARPENTER t.c.

Telactinopteryx striatipennis see *Protembia permiana*.

Tshorkuphlebia gen. n., *compressa* sp. n. Liassic, Ferghana pp. 72, 154 figs., MARTUINOV Trav. Inst. paléont. Acad. Sci. URSS 7 1937.

Tshorkuphlebiidae fam. n. pp. 72, 153 figs., MARTUINOV t.c.

Thysanura.

Onychojapyx gen. n., *schmidti* sp. n. onyx marble, California p. 104, PIERCE Bull. S. Calif. Acad. Sci. 49.

ERRATA

Vol. Iviii, 1921, p. 144, col. 1, line 12, for " *nigra* " read " *nipae* "

Vol. Ixxx, 1943, p. 29, No. 425, for " Die Thynniden von Chile " read " Die Thynniden Chiles " and after " pp. 71-176 " insert " 17 figs. "

Vol. Ixxxii, 1944, p. 65, No. 1226, after " Pepper, J. H. " insert " & Hastings, E. " & delete " Tech. "; p. 96, col. 2, 10 lines from end, p. 100, col. 1, line 27 and p. 101, col. 2, 12 lines from end, after " PEPPER " insert " & HASTINGS "

Vol. Ixxxiv, 1947, p. 210, col. 2, line 11, for " *Tachyoryctidium* " read " *Tachyoryctidium* "

Vol. Ixxxv, 1948, p. 248, col. 2, line 13, delete (DE SANTIS), line 14, delete (BLANCHARD), line 28 for " BLANCHARD " read " DE SANTIS "

Vol. Ixxxvi, 1949, p. 126, No. 2684, for " *Oxypus* " read " *Ocypus* "
 " " " p. 212, col. 2, line 35, for " *Apteranilus* " read " *Apteranillus* "
 " " " p. 297, col. 1, transfer *Antitype* to AGROTIDAE
 " " " p. 330, col. 2, lines 17, 34, 37; p. 331, col. 2, lines 12 & 2 from end; p. 332, col. 1, line 1; p. 333, col. 1, line 2; p. 340, col. 2, lines 15, 17, 24, 27, 28, 30; p. 341, col. 1, lines 16, 47, 49; and col. 2, lines 5 & 2 from end, for " Libya " read " Egypt "

